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MEDICAL MIRROR.

Sir
**Treatise on the Impregnation
of the
HUMAN FEMALE.**

Shewing
The Origin of Diseases
And the Principles of
Life and Death
By **EBENEZER SIBLY M.D.**
New Bridge Street, near St. Pauls.

A New Edition with large Additions.
(And Anatomical Plates.)



LONDON

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TO THE
PRESIDENT,
PROFESSORS,
AND ALL THE MEMBERS
OF THE
ANCIENT AND ROYAL FOUNDATION,
King's College,
ABERDEEN.

GENTLEMEN,

YOU have been the means
of fostering my humble endeavours to perform
that exalted duty practised by the good Samaritan,
of healing and succouring the afflicted.

You have dignified me, by your approbation of
my researches into the Esculapian art, and by
conferring on me that Academic Honour, be-
stowed only on the studious.

Permit me then, in the most unreserved and
most respectful manner, to lay before you the
result

result of those studies, the happy discovery of a Medicine, which, it is hoped, may advance a long wished-for desideratum in physic.

In striving to possess the godlike principle of relieving nature, and expelling disease, I have only done that part which my situation enjoined, but which your countenance sanctioned. I am happy in evincing, by assiduity in my profession, my gratitude to you; and I shall always be ambitious to approve myself, with due deference,

GENTLEMEN,

Your most obliged,

And most obedient,

Humble Servant,

EBENEZER SIBLY.

No. 40, NEW BRIDGE-STREET,

near St. Paul's, London.

PREFACE.

IN this MIRROR, every patient may behold, not only the true picture of his own disorder, whether hereditary or accidental, chronical or acute, but may also perceive the direct and obvious road to an immediate cure; particularly in relaxed and debilitated constitutions; in lowness of spirits, and weakness of nerves; in scrofula, rheumatism, and gout; and in all complaints which have their source in a tainted or corrupted state of the blood, in vitiated lymph, or in spasmodic affections of the nervous fluid irritating the muscular system, the brain, and vital organs of the human machine.

The tender and blushing female, whether married or single, may here discern the admirable structure of her frame, and its natural indispositions, with ample directions how to conduct herself, without wounding her delicacy by communicating her symptoms, her fears, or her apprehensions, to the rude scrutiny of pretended friends.

The country doctor, and professional accoucheur, if he dare divest himself of pecuniary views, and the affluent lord or lady of the manor, if stored with benevolence of heart, may here view a ready means to stop the anguish of the tortured patient, and to relieve the poor diseased husbandman, whose avocation subjects him alike to the severities of all seasons, and that infinite variety of sickness arising from alternate cold, heat, fatigue, and want

want of proper food and clothing, which is every where felt among our village poor.

Above all, the brave and generous uncomplaining seaman, who, subjected to the ravages of the scurvy, yet cheerfully braves the thunderbolts of war, and in spite of winds and waves, keeps from our peaceful shores the devastations of hostility; the poor unprotected soldier, also, who shrinks not from the sanguinary charge, but, regardless both of danger and death, bleeds in his country's cause, are surely the first objects of medical care and comfort. Their perilous situation in the doubtful chance of war, powerfully solicits us in their favour, draws out our compassion to feel for their sufferings, melts us at every new picture of their distress, and urges us to search out the balmy oil of the good Samaritan, to heal their bleeding wounds. In this Mirror such a balm is discovered; which, if applied in time to gun-shots, stabs, and wounds, may be the means of preserving to their relatives and friends, some thousands of valuable members of society.

T H E

Medical Mirror.

OF THE HUMAN IMPREGNATION.

IN the exercise of our three-fold duty, to God, to our neighbour, and to ourselves; in contemplating the works of creation, and the Word of God, unfolded to us by the light of reason and scripture; by analogy, medical experiments, chymistry and anatomy, we are enabled to trace the human economy farther in her retirement, and deeper in her occult retreat, than some *medical men* are willing to suppose.

Impoverished by a fashionable style of living, and driven to a necessity of multiplying potions and fees, their object is not to heal, but to nourish the seeds of human infirmity. The truth of this remark has been but too often experienced, and indeed CONFESSED by some, in those awful moments when dissimulation would be vain. Far be it from me to arraign the professional character in its general capacity; it is only the medical locusts that I wish to eradicate; and I am persuaded every good man in the faculty would with heart and hand assist me in so laudable a pursuit. It was principally with this view, and to assist private families in the moments of extremity, that I was induced to offer those simple modes of cure and self-preservation,

so amply dispensed in my edition of the Family Physician: and my present purpose being to make that book still more complete, I shall here explain the nature of human generation, and the true principles of animal life, that I may from thence deduce the origin of hereditary diseases, and point out, with more facility, those which are accidental. In this Treatise also, I shall endeavour to furnish my readers with such obvious directions for *eschewing the evil, and choosing the good*, which, if resolutely followed, will not fail to preserve health and long life, and prove of no small benefit to future generations.

When God created Adam, he made a summary of the world's fabric, an abstract of the divine nature: in man he ended his work: on man he stamped his seal, and the sign of his power; and imprinted on him his own image and superscription, his ensign, and his portraiture. God said, "*Let us make man in our own image, after our own likeness.*" In the creation of man, God seemeth to deliberate, and take counsel with Himself*, how to epitomize and gather together all his works into so small a compass;---to contract his vast book of creation into so minute a volume. Man is called the microcosm, or little world; the recapitulation of all things; the ligament of angels and beasts; heavenly and earthly; spiritual and corporeal; the perfection of the whole work, and the honour and miracle of nature! In him was also planted seeds of that divine essence requisite to propagate the human LIFE

* The three principles of the Divine Essence, in which Essence these three principles are united. Theologians call them Father, Son, Holy Ghost. The Naturalist, Matter, Spirit, Motion. The Chymist, Salt, Sulphur, Mercury. The Anatomist, Body, Blood, Spirit. The Botanist, Substance, Fragrance, Sap. But the Philosopher comprehends them all, and searches out this Triune Power, THIS FIRST GREAT CAUSE, from the animal, vegetable, and mineral kingdoms; and with his intellectual faculties soars into the ætherial regions, and exclaims, with David: "I am fearfully and wonderfully made!"—"Whither can I go from thy Spirit?" Psal. cxxxix. 7, 14.

and SOUL. Theologists may contradict me, yet I will not so much derogate from the wisdom and omnipotence of the Creator, as to suppose he should watch the impregnation of every human female, and by so many separate and distinct acts of his power, give life, spirit, and soul to the foetus. The Creator of man, viewing with unbounded foresight the purposes before him, by one act of his omnipotence, blended in this first man all the faculties of the human and celestial nature; and, without any doubt, when he was formed *one*, in GOD's express *image*, he possessed the means of propagating, from his own essence, beings like himself. It is here difficult to associate the imperfect ideas of human reason with the mechanism of Divine wisdom; and yet our conceptions may in some degree unravel the mysteries of nature, by causes and speculations, which, in proportion as they captivate our senses, and raise our admiration, excite in us a reverential awe of futurity, and a grateful sensibility of the goodness and mercy of him who gave us being.

From the evidence of scripture, it is indisputably clear, that in the person of Adam the male and female properties were originally combined*; as indeed we now find them in many species of the lower class of animals; consequently the expression of *male* and *female* does not necessarily imply two distinct bodies. In Genesis, i. 27, we read, that GOD created man in his own image, i. e. of perfection; including or containing the prolific or generating powers, which are distinguished by the expression of *male* and *female*; and GOD blessed them, i. e. these male and female properties, and said unto them, *Increase and multiply, and replenish the earth*, i. e. with beings like Adam; for

* Man being composed of three essences and four elements, had the active principle of COLD and HEAT, and passive principle of DRYNESS and MOISTURE, inherent in himself.

this benediction, and this command, were *antecedent* to the formation of Eve, as every one must know who reads the first and second chapters of Genesis.

In this *plural* capacity, therefore, Adam received the blessing of God, when he said unto him, *Be fruitful and multiply, and replenish the earth, and subdue it; and have dominion over the fish of the sea, and over the fowls of the air, &c.* The six days' creation was now completed; and on the seventh day God rested from all his work; and having formed Adam, and breathed into his nostrils the breath of life, *he became a living soul.* God also planted the garden of Eden, and put the man into it, to till it, and to dress it; and God commanded the man, saying, *Of every tree of the garden thou mayest freely eat; but of the tree of the knowledge of good and evil, thou shalt not eat of it; for in the day that thou eatest thereof, thou shalt surely die,* Gen. ii. 27.

Let us here remark, that all these transactions, injunctions, and commands, had passed *before Eve was formed*, or, in other words, before the male and female essences were separated and made the essential parts of two distinct persons. Adam likewise, before this event took place, was appointed God's viceroy over all earthly things, both animate and inanimate; the very elements being made subject to him; for *he was formed more noble than the angels, and crowned with glory and honour, i. e. having the peculiar advantage of multiplying his own race.* He was, as to his external form, moulded of celestial æther; consequently created upright, scarcely touching the earth, and quite opposite to the *vegetable plant*, whose root is therein fixed; far different also from the BEAST, who is a mean between a plant and himself, and goeth downwards, his two extremes tending to the bounds of the horizon; this upright gait belonging
only

only to the human species, as the holiest and most divine creature; his head elevated toward the heaven, on which he looks, and contemplates, with grateful adoration, the omnipotence of the Creator; he was formed naked, being pure; delicately made of thin subtle well-tempered and seasoned humours, and, previously to his fall, his body emanated rays of brightness and splendor*, similar to those which our ideas furnish of Moses and Elias, when they conversed with God. His reasoning faculty, and *living soul*, were formed of the *eternal essence* or *tincture* of the Divinity; being nothing else than what is termed the *breath of GOD*, that spark of immortality which generates the *soul*, and is the distinguishing characteristic between man and beast. For, although brute animals inherit the five senses, and possess an instinct to direct them in the choice of food, and to impel the propagation of their species, yet these are only senses formed from the *outbirth*, or four elements of nature; and not from the *tincture* of the Divinity, the *essence* or *centre* of nature, out of which the soul, the mental intellect, reason, sense, and understanding are all formed; for man was endowed by his mind to penetrate into the essences of all things, comprehending, at one view, its origin and property, and to make a transfer of the same to posterity. "*For with the powers which GOD has endowed man, with the same powers shall he multiply his race.*"

From the foregoing passages we are warranted to infer, that the original man was possessed of his spiritual soul, and rational intellect, for the purpose of propagating their intellection to all future generations. By the force of this rational intellect, or eternal spirit, unclouded by the deformity of sin,

* An astonishing difference between the weak and gross insensible perspiration now and then; may we not say with the prophet, "How is the gold become dim! how is the most fine gold changed!" Lament. iv. verse 1.

he knew and perceived the nature and property of every animated being; and to exercise this intellect, God brought before him every created thing, to see what he would call them; and *whatsoever Adam called them, that was the name thereof.* He knew and perceived the nature and quality of all animals; and according to their designation and subjection to the external elements, so he assigned them those characters which they have ever since borne. Adam, however, in his primeval state, was not himself under the influence or power of celestial or terrestrial elements; but, on the contrary, they were subject to his control. He was immortal; they corruptible. They sprang out of time, and were elemented; he sprang from the limbus of eternity; and into eternity the divine essence, or soul, propagated from him, must indisputably return.

But man, thus created in honour and immortality, abideth not. The purpose of his creation was to fill the place of the rebel angels; and hence Lucifer became his mortal foe. This fallen spirit had entered the gate of Eden, and was preparing to seduce Adam, when the Almighty constituted the test of his obedience; for having endowed him with a *free will*, an innate power of choosing *good or evil*, and of multiplying his specie, it was but reasonable to expect from him an implicit obedience, and an angelic race. He that is alone eternal and omnipotent, could not but foresee the subsequent event; and it is his supreme goodness to counteract evil, by preventing its worst consequences. Foreseeing that the prolific tincture, or eternal essence of fecundation, might be contaminated by the malignant spirit of Lucifer infusing itself into the mind of Adam, who then, instead of multiplying an angelic race, would generate devils; and that were man to fall in this plural capacity, there was no counterpart, no feminine principle, through the medium of which

which the *serpent's head could be bruised*, or a Saviour become incarnate:---on a further survey therefore, after the works of creation had been completed, animals named, and man formed and compounded of the male and female tinctures, GOD said (Gen. ii. 18) *It is not good that the man should be alone; I will make him an help meet for him*; wherefore the rib, i. e. the *feminine* or *conceptive* essence, the SOFT, MILD, and LOVING principle, was taken out of Adam, and concentrated or moulded into a new being, called woman. The emission of this feminine essence, or tincture, threw Adam into a deep sleep; yet when he awoke he knew that an essential principle had departed from him, and that the woman was *bone of his bone, and flesh of his flesh*; not having been created, but formed out of himself, whereby he only retained the fiery property, the animating principle, or active power of generation; whilst the rudiments or seeds of future beings were consigned to the matrix of the woman; cold and moist, of the watery property. Here then individual generation ceased; and Adam, without the *counterpart of himself*, had no longer power to increase and multiply. Thus the two tinctures, or divine essences, animating and compounding soul and body, were divided; and by means only of a re-union, or contact of those tinctures, could generation, then or now, be performed: It is on this ground that the male and female affections are continually turned towards each other; and that the desire of love and union so strongly pervades every individual of the human race. Hence also the tempter's reason for beguiling Eve, and hence the seducing power of love, which determined Adam to share in all the horrors of her crime, so pathetically and affectingly described by Milton, in his *Paradise Lost*.

The fatal consequences of the fall we most
sensibly

sensibly feel, and universally deplore. The earth shook from her foundations. The order of nature was quite inverted. The ætherial and terrestrial elements, which before were fashioned in harmony, and acted in unison, were now discordant, intemperate, and furious. Brute preyed upon brute, and bird invaded bird. The delicious fruits and flowers of Paradise were exchanged for thorns and thistles, and a poison injected by those jarring elements into every green herb*. The serenity of a pellucid and smiling firmament was convulsed by the thunders of an incensed Deity, by forked lightnings, by contending seasons, by devouring winds, and impetuous storms. Whilst man, ungrateful man, from the privilege of holding these elements in subjection, became subjected to them; and hence subject to all the perils and misfortunes of his fallen nature.

Here, then, began the conflict of the human passions, as violent and ungovernable as the elements themselves. Here the toil and labour of the man, who should *earn his bread by the sweat of his brow*, and the tears and travail of the woman, who should *conceive in pain and sorrow*, had each their source. Here, likewise, the dark catalogue of human infirmities, of disease and death, had its too early date; yet to this æra, which gave birth to our manifold misfortunes, must we look for that benign source of alleviation and cure, which the conciliatory hand of Providence has graciously afforded to those who will seek for them; *for out of the ground hath the LORD caused medicine to grow; and he that is wise will not despise them; for with such doth he heal men, and taketh away their pains*, Eccl. xxxviii. 4, 7.

Since, by his fall, man became subject to the

* By this appears, what necessity there is for every herb made use of in medicine to be divested of its gross and deadly property by chymical purification.

elements, and their seven rulers*, from these he receives the constitution of his body; but his reasoning intellect, and spiritual soul, are derived from the pure essence or tincture of the Deity, originally infused into the seed of man. To the violence and impurity of the elements we owe the disorders of the body; to the temptations and allurements of Satan we justly impute the diseases of the soul. Yet, by due attention to our reasoning faculty, it is no hard task to preserve health, or prolong life to the term of its *natural* dissolution; whilst, by the powers of the mind, and the light of the gospel, we may still avoid the poison of sin, and become members of that glorious kingdom which is the sure reward of the good and virtuous.

The imperfections and diseases of the body, therefore, beginning with Adam, are consequently transmitted to his posterity; and may be divided into *hereditary* and *accidental*. Hereditary complaints proceed from a certain defect of the animal powers, or imperfect state of the sanguiferous system, at the time of copulation. The accidental consist of all such maladies as are communicated by the discordant or putrid state of the elements, not only during the time the child is encompassed in the womb, but from its birth to the latest hour of its existence. And it might here be observed, that the increase or decrease of both hereditary and accidental diseases, depend almost entirely upon the *purity* or *impurity* of the blood. For if pure in both male and female, at the time of impregnation, the foetus will be naturally strong and healthful. So likewise, if after parturition, and during life,

* The moistening influx of the moon acts on the marrow of the brain. Venus has her power in the genital parts. Eloquence is derived from volatile Mercury. The Sun hath a great affinity to the heart, and governs the vital principal. Mars, the author of choler, has his residence in the gall; Jupiter, in the liver, the fountain of nutritive blood; and the spongy mill, the receptacle of melancholic humours, is the chief residence of Saturn.

care be taken to keep the blood in an uncontaminated and elastic state, we shall not only avoid the common effects of excessive cold, heat, and moisture, but escape that direful train of acute diseases, communicated by putridity and infection; or, should they by chance attack us, the effect becomes slight and temporary. A circumstance, this, which surely ought to weigh perpetually on the minds of those who know how to value the blessing of health, or would wish to live a long, an active, and a pleasant life. This is therefore a speculation of that high importance, that I shall now shew how hereditary complaints are communicated in the act of copulation--how increased and fostered in the womb--how accidental diseases follow and grow up--and how both these enemies to the health and happiness of mankind may be prevented or overcome.

In that union of the sexes to which we are instinctively impelled; or rather, in the union of those essences, or tinctures, peculiar to the generative organs of the male and female, in the contact of which the first moments of human existence commence, the most whimsical and absurd theories have been set up. No branch of physiology has been more exposed to censure and mistake. While the phenomena of the heavens, of the earth, and even of the human mind itself, are traced with a steady hand, and with all the dignity of philosophy, the functions of the human body, in health as well as under disease, though expounded with a profusion of fantastical erudition, appear in almost as much doubt and darkness as in the days of Paracelsus.

Let us then proceed to review the mode by which generation is accomplished. I have in my former writings explained the systems of Buffon and of Lewenhoeck, in their speculations on the animalculæ found in the seed of man, and in that

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of brute animals; I have also, in the medical part of my Family Physician, shewn the mode by which generation is performed, so far as relates to the action itself, and to its general effect. I shall now consider it in a new light, as it concerns the propagation of soul and body, and of family temper, likeness, and disease; but as the female organ is so materially concerned in the mysterious act of generation, and in all its consequences, I shall here take up the reasoning of a late ingenious author, whose opinion of the action and powers of the female generative parts exactly coincides with my own.

The extremity of the uterine system, without the nymphæ, seems not (except from its aperture, and the lascivious susceptibility of its texture) materially requisite to generation. Immediately within the nymphæ, the *vagina*, or great canal of the uterus begins (*vide the Plate*). Before coition has disturbed its proportions, it is generally about five or six inches long; and when thrown into a circular form, without violent distention, its diameter is about a sixth part of its length. But as, in coition, the vagina is the immediate receptacle of the penis, it is capable of great distention, and may be rendered of very considerable capacity. In general, however, after frequent contact, this canal becomes much shorter, but more proportionably increased in its diameter; yet being contrived by its organization for the purpose of exciting titillation and pleasure, it can, and does, accommodate itself to whatever size is necessary, closely to embrace the penis in the act of copulation.

At the upper extremity of this canal, the uterus, or womb, is seated. It is of a pyramidal form, with its apex towards the vagina. Its greatest length, in virgins, is not more than two or three inches, and its width is scarcely one; its internal cavity must therefore be very small. It is connected to the va-

gina, or great canal, by a passage so small, that a bodkin or filet cannot be introduced without much difficulty. In the broad or upper extremity of the womb, the ovaria are seated. Their substance is spongy, and they contain an indefinite number of vesicles, of a duskyish semi-transparent quality, the involucri of which are distinct, and similar to the general substance of the ovaria. These vesicles are the ova or eggs, which contain the rudiments of the fœtus, of temperature, cold and moist, and which must absolutely be impregnated with the male seed, containing the fire spirit, before it can be possible for generation to take place.

Now it has been, and is, the common opinion, that when venereal embraces take place, the whole genital system of the male being thrown into action by libidinous desire and violent friction, by this exertion the semen is thrown with considerable vehemence from the penis, and is either forced through the mouth of the womb, and attracted by the ovaria; or, that it is received by the Fallopian tubes, and conveyed by them through a variety of convolutions, till by their fimbriæ they are conducted to the ovaria, in the manner I have already fully described in the medical part of my Family Physician; all which tedious and complicated process is alleged to take place in the *instant* of coition.

Others again suppose, that the internal orifice of the womb becomes open and pervious during the exertion and enjoyment of copulation, and that the glans of the penis absolutely pass into the cavity of the womb, and eject the seed immediately upon the ovaria. To each of these theories there appear insuperable objections. In refutation of the first, we need only observe, that the vagina, from its structure, and from its organization in the act of venery, is disposed strongly, and in every part, to embrace the penis; and as the glans must there-

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by be closely furrounded, although it reaches not in every person to the farthest limits of the vagina, the slight and momentary impetus of the semen will thus be very effectually resisted, if not totally subdued. If the penis be not of magnitude sufficient to occupy the vagina to its full extent, the unoccupied space must be somehow distended; and, let this vacuum be what it will, its resistance must be effectual; and if it be not distended, the power or pressure which occasions its collapse, will over-balance the impetus of the semen. But supposing the virile member in all cases to be so exactly proportioned as to occupy the whole length of the uterine canal, which however we know is not the case, yet from what principle shall we ascertain that the feminal tube of the penis and the apex of the womb shall be made so exactly to correspond as to become continuous? The semen, in the event of coition, is doubtlessly thrown out by the penis with some force, though this force will always depend upon the vigour of the male organs, and therefore must vary from the lowest to the highest degree of vigour of which those organs can be susceptible. But even allowing the glans, penis, and apex of the womb to fall into exact contact upon due penetration, and that the male seed is always ejected with considerable force from the penis, and the vagina to be no barrier to the progress of it, yet how is it to force its way into the cavity of the womb? The aperture which leads from the vagina, or great canal, into the womb, is in fact no aperture at all. During menstruation, indeed, it is pervious; but even then it is only capable of admitting a very small probe; and this is no argument that it is naturally, and at other times, pervious. How often, too, has this aperture been entirely blocked up by preternatural obstructions, and conception nevertheless taken place? Instances of this have often occurred; and the precision and authority

authority with which they are recorded by different practitioners, leave no room to evade the argument. Hence this mode of impregnation appears not only highly objectionable, but utterly impossible; having no correspondence with the human structure, or with the economy of nature.

After what has been said, it may appear idle to prosecute any farther refutation of the progress of the male seed by the Fallopian tubes, or through the mouth of the womb. But as authors of the greatest respectability have believed in its progress through the tubes, and tell us they have even seen it there, it may not be improper to enquire how far this is ascertainable? The Fallopian tubes, through which the semen is said to pass, originate, by very minute perforations, through the fundus of the womb; and, increasing rapidly in their diameters, their capacities, when dilated, may be about the third part of an inch, where they approach the ovaria. Here, again, they suddenly contract, leaving only a small opening, while their main substance is still continued, and is expanded into that plaited or jagged fringe, called the fimbriæ, which is contiguous to the ovaria *. I shall now ask, by what law in nature, by what effort of it, is the male semen to be conducted through this conical and convulated canal? Can the semen now possess any active force, to introduce itself through the rigid perforation of this organ, and to overcome the collapse of the tubes? The stimulating power of the semen must soon be lost in a vessel which it has not power to distend; and we cannot suppose it capable of acting in a direction completely opposite to what is the acknowledged office of the tubes. It must be by irritability that the ovum is conveyed into the uterus from the ovaria; and we know no vessels in any part of the body whose ac-

* See the medical part of my Family Physician, pages 17, 89, 97, &c. where all the parts, both male and female, are anatomically described.

tion is double and contrary. This system therefore has every appearance of improbability. But we are told by some, that they have actually seen the male semen in its unaltered state, lodged in the Fallopian tubes. These sagacious authors might as prudently have affirmed that they had seen snow upon the canal in Hyde Park, at Midsummer. They did not know, or did not choose to recollect, because it made against a pre-conceived opinion, that the human seed, when subjected to heat, especially to such a moist and natural heat as those parts constantly afford, soon loses its spissitude and tenacity, and becomes very subtilly fluid, and almost colourless. Besides it is universally acknowledged, that a considerable part of the semen is almost always, immediately after coition, rejected by the female. When we attend to the many instances of credulity and imposition in the theories of generation, we need not marvel at the aptitude and facility with which pretended discoveries creep into notice, and the solemnity with which they obtrude themselves into systems.

All the foregoing arguments, against the possibility of a pervious communication between the vagina and the uterus, are also conclusive against the suggestion, that the penis, in the act of coition, penetrates into the cavity of the uterus. Nor is the assertion of those who contend that this orifice, by the turgidity of the parts during coition, naturally opens and dilates itself, to receive the male seed, marked with the least degree of probability. How is this dilatation of the orifice to be effected?—Though the whole uterine system, during the venereal act, be rendered stiff and turgid by animal desire and influent blood, yet it is more probable that this turgidity would rather compress than dilate the orifice; and the structure and texture of the womb seem exceedingly unfavourable to sudden dilatation, by any means whatever. In an unimpregnated or virgin

virgin state, the uterus is so small that its sides coalesce or adhere together, and it has no hollow appearance whatever; though from the texture and elasticity of its fabric, it may be thrown into a globular form, which will constitute a cavity. But in coition, with all its occult and uncommon phenomena, what charm have we left to overcome this coalescence, and form this cavity, by opening or separating the membranous sides of the uterus?--- Will it here be said, that the forcible ejection of the male semen will effect this purpose? or that the stiff and turgid state of the penis itself will force its way into a fabric so remote and delicate? Though females may entertain sanguine ideas of these things, we must suppose that the vigilant anatomist, toiling through the unalarming and chill organs of the dead, ought to furnish a more rational hypothesis, whence to deduce the active principle and admirable process of the human impregnation.

Authors have been always eager to establish the certainty of a considerable afflux of blood to the female organs, and consequent turgidity, during the voluptuous communication of the sexes; and this has been a wonderful prop to many absurd conjectures. This afflux, and consequent turgidity, they suppose, originates, like the erection of the penis, from the strength of libidinous ideas, and other locally irritating causes; and is intended by nature to induce a tension in the female organs, that the progress of the semen may thereby be facilitated. This tension, again, they suppose, induces some kind of constriction, which is said to support the action of the different parts of the genital system, but particularly of the Fallopian tubes. These tubes, it is said, are remarkably distended during coition, by the blood rushing into the numerous vessels which creep between their coats, by which means they are erected, and their fimbriated terminations applied to the ovaria; and it is gravely

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ly added, that dissections of pregnant women, and the comparative anatomy of brutes, corroborate the opinion. Were it not for the serious respect with which this anatomical observation hath for a long time been favoured, nobody, surely, would be at the pains of detecting the absurdity. Allowing that this turgidity, with all its concomitant circumstances, really happens in the *living* subject, how can it possibly exist in a carcase flaccid with death, and, as is always the case in a human anatomized body, where death must have taken place some considerable time before?

But this turgidity, though it sometimes may happen, and yet in a degree very limited to what is alleged, does not always happen; and when it really does take place, it seems rather to be the companion and encourager of libidinous gratification, than a principal and essential promoter of conception. To many women the male embraces are uncommonly, if not extremely indifferent; and to some they are absolutely disagreeable; yet even these women are prolific. There is no difficulty in suggesting a very sufficient and natural reason why the parts of the female, directly subjected to the action of the penis, during the venereal congress, should become turgid with influent blood, and sometimes be constricted. Nature, though she seem in general unfriendly to excessive lust, yet sometimes permits it; and these are the means she seems to have appointed for heightening it. Besides, it is proper that the animal instinct, which prompts the re-production of the species, should not be disappointed in its gratification, however brutal these sensations and ideas may appear to the purified philosopher. These means then, however they may contribute to the mutual sensibility of the sexes, in the voluptuous gratification of animal pleasure, appear to have no real influence on the process of generation, after the venereal congress

gress has ceased; nay, we have reason to believe that their action or influence does not extend beyond the limits of the vagina, except in common with the rest of the general system, even during that congress. If an afflux of blood to these parts were always to be attended with these effects, what violence must the ovaria be exposed to by reiterated coition, and by every return of the menstrual discharge! During the menstrual afflux, a very considerable distention must surely take place over the greatest part, if not the whole, of the genital system; and as this turgidity is the principal reason assigned for the action of the tubes, by what means are the fimbriæ diverted from exercising those functions which turgidity, though from another cause, at another time so successfully instigates? Also, how happens it that grateful copulation is not always productive, and the contrary? That the fimbriæ, in every venereal act, do not operate upon the ovaria, and thereby produce more fœtuses, or a waste of the ova; and that the organs themselves are not incapacitated, or diminished in their energy, by such repeated exertions? We have every reason then to conclude, that the tension and constriction of the female organs, induced by the afflux of blood during coition, if of consequence, are intended solely to promote animal gratification; and that they have no direct influence on the actual progress of the semen through the above-described communications to the ovaria.

Upon the whole, it is certainly no way equivocal, that the semen cannot, in any manner, be applied to the ovaria by means of the fimbriæ; that it cannot ascend or advance through the convolutions of the Fallopian tubes; that it cannot divaricate and traverse the compressed uterus; and that it cannot even effect a passage through the rigid bulwark of the cervix uteri. The probability of the progress of the *aura seminalis* through the same paths

paths is destroyed by the same arguments; and the whimsical opinions founded on the presence of animalcules in the semen, and on the organic bodies furnished by the semen of both sexes, and uniting in the uterus, as far as this alleged aperture is concerned, must stand or fall by the same fate. It may however seem strange, that a doctrine so ancient, and so universally believed, should be so easily overthrown; and it may furnish to the speculative reader unfavourable ideas of the present state of medical literature. He may indeed wonder that, though every science has become rational and respectable, by the exertions of various cultivators, medicine alone has been able to resist the diligence of a thousand years: although it has been wrested from the hands of nurses, and its profession become dignified and lucrative, it can scarcely be said, at this day, to afford one unquestionable idea.

In the volumes of physiology, compiled by the most learned physicians, and drawn from the most learned sources, will the unconcerned philosopher find the dogmata of medicine consistent with nature, or with common sense?

But since the semen, in some shape or other, contains that animating principle which is indispensibly necessary to generation; and since the ovaria as indisputably produce something from whence a living creature is to be disclosed, it becomes demonstrably clear, that the influence of the male seed must be powerfully incorporated with the female, and directed to the ovaria, before this effect can possibly take place. We have already seen how this cannot happen; let us now endeavour to point out a rational medium by which it may be accomplished. For this purpose we must again return to the vagina, or canal of the uterus, as being the principal organ on the part of the female, which actually contributes to propagation; and without the full and complete use of which;

impregnation cannot take place. It therefore demands a very minute and attentive investigation.

The vagina is elastic, and somewhat membranous, composed of muscular fibres, blood-vessels, nerves, and lymphatics. It commences from beneath at the nymphæ, and rising obliquely about five inches, is lost upon the uterus. Its capacity is very different in different subjects, and in no very distant periods of life in the same subject. A very respectable anatomist finishes his description of it by saying, it is "*membro virili secundum omnes dimensiones accommodabilis.*" Its inner membrane, though very uneven, is delicately smooth, and, from its nervous texture, exquisitely sensible; the outer membrane is more spongy and muscular; and the whole body of the canal is plentifully supplied with blood-vessels, nerves, and lymphatics. We know little more of the lymphatics of these parts, than that they are more proportionally numerous than in any other part of the body. Those which originate in the exterior parts of the female genital system, traverse the inguinal glands, while the deep-seated ones take a much more direct course to their place of union with the lacteals; but of these we shall be more particular, when we adduce our observations in favour of a very powerful absorption subsisting in the vagina.

The entrance into the canal of the uterus from without, is guarded by the nymphæ, which form an eminence on each side, so peculiarly constructed and arranged, that we must think lightly of the physiologist who could suppose them to be only appendages in office to the urethra. Indeed, as nature frequently operates more than one end by a particular structure, we shall not pretend to limit the secondary or inferior offices which the nymphæ may promote; but we see much reason to believe them created to assist powerfully in preventing the speedy escape of the male semen, and thereby exposing it
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longer to the action of the absorbent system. A multitude of circumstances corroborate this belief; and it will not be impaired by the allegation, that these ridges by no means constitute a regular and complete valve. Immediately within this barrier, a structure, on the same principles as those of the nymphæ, but more elegant and powerful, commences; and it is continued over the surface of the vagina, gradually growing finer, till it is lost in smoothness near the upper extremity of the canal. This structure is the rugæ of the vagina, so accurately drawn and described by Haller and others; but degraded by some anatomists, who mark it only as useful in exciting venereal enjoyment, or admitting expansion during coition and parturition. It is insinuating a mean and disgraceful reflection on the important order and operations of nature, to suppose that these rugæ, which are not casually arranged, but are regulated with as much precision and uniformity as we can trace in any other part of the general system; I say, it is nugatory and presumptuous to assert, that this intricate, extensive, and beautiful arrangement, has been so minutely laboured for no other purpose, but merely to excite a greater titillation during the gross and libidinous commerce of the sexes, and a greater extension during parturition. This structure may indeed promote secondary purposes; but it is intended for much nobler ends. Had these rugæ been constructed merely for simple contraction and dilatation, they would have covered equally the whole surface of the vagina, which certainly does not happen; neither, if these had been their principal uses, would they be so soon and so easily obliterated. We believe, then, that the rugæ of the vagina are thus contrived principally to protract the semen in that viscus, after the penis is withdrawn, and thereby to favour absorption

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tion; especially as the qualities of the semen coincide wonderfully with these intentions.

The semen, as it is secreted from the blood in the testicles, is very different from that heterogeneous mixture which is expelled by the urethra in coition; though by the alteration its fecundating quality is not improved. When it is conveyed into the vesicles it is of a thin consistence, of a pale yellowish colour, and little in quantity. In these vesicles it is somewhat inspissated, and its colour heightened; and after it is mixed with the liquor of the prostrate glands, it becomes still thicker, and of a more whitish colour. This consistence which the semen acquires in its progress, from the testicles, may produce other slight properties; but the principal intention of it seems to be to correspond more effectually with the absorbent power of the vagina: for thus, by the increased tenacity of the semen, the remora of its fecundating part must be protracted in the vagina, whilst, at the same time, the absorbents are allowed more time to attach those active subtiler parts intended to be carried into the circulating system. We may add here, in order further to confirm the opinion concerning the use of the tenacity of the semen, that when too little of this mucilage is derived from the glands, or when it is of a depraved or thin quality, and of a cold nature, instead of a warm, vivifying, and quickening property, by which defect the whole mixture escapes the machinery of the vagina too rapidly, coition becomes totally unproductive. This is the seminal serosity, as it is called, held to be one of the few causes of sterility in man. And we may add further, that when the consent and power of procreation begins to fail on the part of the woman, the crenulations of the vagina are then always visibly decayed, whether affected by the advances of age, or by imprudently reiterated venery. But what are we to think of a very respectable



A View of the Absorbent Vessels.

peccable author, who gravely tells us that the semen by stagnation, and by the addition of the cream-like liquor of the prostrate glands, is better suited to the projecting effort of the urethra, in the event of coition? Indeed, it is not to be denied, that the increase in quantity of the seminal mixture may enable the projectile power of the urethra, with its aiding muscles, to act with greater efficacy; but a boy would laugh in my face were I to tell him that by adding to the weight and tenacity of water, his squirt would throw it much further.--- To act in concert, then, with these unquestionable qualities of the semen, the surface of the vagina, by means of its rugæ, from their elevation and arrangement, must have a very considerable effect in heightening the remora we have described. No doubt, if nature only had in view the prevention of the regrefs of the semen, we might have met with a much simpler mechanism; but as to this part very different offices, and all of them material, were allotted, it has been intricately qualified for them all. Thus, upon the whole, we see an admirable disposition in the semen, and in the surface of the vagina, to facilitate and promote the action of the absorbent vessels.

Though the absorbent system has not been traced with the same minuteness and success which have followed the investigation of the sanguiferous system, it is however known to be very general and very powerful, and it is remarkably so in the cavity of the pelvis. How, otherwise, is that effusion, which is constantly going on, in order to lubricate the whole genital system in the female, and to prevent the coalescence or concretion of its sides, resumed? In those unfortunate females whose menses have taken place, but in whom likewise the expulsion has been prevented by the unruptured hymen, or by unnatural membranes blocking up the passage, much of the blood has always been reformed;

reformed; and in those whose diseases have existed long, and where the thick parts of the blood have begun to be broken down, the colluvies has been reformed, and a train of symptoms induced, not to be accounted for by the mere turgidity which this obstruction occasioned. The infection and progress of syphilis, or confirmed lues, not only establish the certainty of a very rapid and powerful absorption in the vagina; but also exhibit the prevailing influence of the irregularities of its surface. It is surely very evident, that the chief application of the venereal virus, whether in gonorrhœa or syphilis, but especially in gonorrhœa, must be near the further extremity of the vagina, though there can be no doubt but the ulcerated glans may often affect the exterior parts by its introduction; but in a confirmed lues, the fundus of the vagina is rarely the seat of an ulcer, and it is never affected in gonorrhœa. Here the surface of the vagina being mostly smooth, the poison runs downward, till falling upon the rugæ, it is there intercepted and retarded. Here then the poison is multiplied, and leisurely applied to the mouths of the lymphatics, through which it is carried into the blood, where assimilating together, it contaminates the whole mass. Though the progress of the syphilitic poison is not always thus regular, the variations do not affect this opinion. When the lymphatics and their glans are vigorous and easily permeable; when the application of the venereal virus is within the nymphæ; and when it is sufficiently active, the first symptoms of disease arise from general contamination; and were this poison always very mild, and taken up by the absorbents within the nymphæ, there is no doubt but the whole mass would almost always be diseased, without much chance of ulcer or preceding bubo. But there are many circumstances which tend to retard the speedy absorption of syphilitic virus, even when it is extremely

tremely active; and among these the inflammation, which in general it must induce, is not perhaps the least considerable; but these cannot affect the absorption of the seminal fluid of the male. The syphilitic virus too may, from the laxity and lubricity of the vagina (a circumstance very general in immodest women) not only escape absorption, but may be carried outwards, to exercise its energy on the external parts. It is partly from these reasons that immodest women are so little disposed to conception, and that modest women, when subjected to venereal infection, generally experience the most latent and violent species of this disease. As therefore a greater surface of absorbents is exposed in the female to the contaminating influence of the diseased male organs, and as the greatest part of the female genital system has a much readier intercourse with the blood than through the inguinal glands, we meet with this species of syphilis much oftener in women than in men. The cure of syphilis too, by specific remedies introduced into the vagina, fully demonstrates the strength and activity of the lymphatics in this canal. Is there then a ready and established communication, for disease and for its remedies, between the vagina and the general circulating system of the blood; whilst a mild fluid, yet possessed of activity infinitely beyond that of any poison, and created for the highest and best of purposes, is not permitted to traverse the same channels? Many other corroborating circumstances, both in fact and in analogy, might be adduced here, were not these arguments in themselves conclusive.

In a due state of health there is what may be called an intestine motion in the blood, occasioning and promoting its commixture, as well as its separation. In all general diseases, and even in many which are called local, this intestine commotion is heightened, diminished, or deranged; and

and in the exanthematous or eruptive disorders it must be remarkably so. In syphilis, though this disease is not directly exanthematous, there must be excessive disturbance and certain depravation prevailing throughout the whole system, before such complete destruction can be brought upon it. In those cases of diseases, whilst vehement infection, with its fatal consequences, is overturning all before it, we have always found that milder infections could make no impression. Hence the practitioner never hesitates to ingraft the small-pox, though the patient may have already received the disease, either by natural contagion, or by prior inoculation: hence a milder disease is often removed by a severer one; hence slow consumption is always retarded, and often overcome, by fecundation; and hence fecundation itself, as the feeble stimulus, is often prevented by the anticipating disturbance of syphilis, or of similar diseases vehemently pre-occupying the circulating system. It is this anticipation, this prior possession and change in the circulating blood, which reasonably and emphatically accounts for the want of influence in the human semen upon the female after impregnation has fully taken place, or while the mother is providing milk. And we might account for the production of twins, triplets, and those rare instances of more numerous progeny, from the same circumstances. One, two, or more ova may indeed be so ripe as to meet completely the fecundating impulse of the male semen at one time; and it is perhaps more strange that the different fœtuses should be matured and expelled about the same time, than if a greater period intervened between the expulsion of each; and might not a second intercourse of the sexes be successful, when the female circulating mass was not fully pre-occupied by the influence of the first? But the extent and influence of prior infection, or impregnation of
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the blood, has been better observed in the venereal, than in any other disease or natural occurrence. Women whose general system is vitiated by the syphilitic virus, are always incapable of conception; or if the vitiation be not complete, but in a slight degree, an imperfect fecundation may take place; but its product fails not to demonstrate the want of energy, and the unqualified state of the mother, from whence it drew its principal arrangement. These ideas are corroborated by the mode of cure adopted in the circumstances we have been describing, and by the general effects of it.

Thus we have endeavoured, and we hope with success, to establish the truth of a strong power of absorption in the genital system of the female, originating in the vagina; and a disposition in the whole mass of blood to be affected according to the properties of what may be mingled with it. And as, from the present state of anatomical knowledge, we have no right to suspect any other mode than this of absorption, by which the unrejected and finer parts of the semen can in any shape, and with any effect, be determined towards the ovaria, let us see how this can be farther ascertained by what we may suppose to be the effect of the absorbed semen, and the future appearances of impregnation.

In human creatures the evolution of all their parts is gradual, and the work of time. From the moment in which the ovarian nucleus receives the vivifying impulse from the semen, till the period of puberty; from the dawn of its existence, to the completion of its figure and its powers; its alterations are so many, and so varied, that our idea of the germ is not recognizable in that of the infant, and our idea of the infant again is lost in that of the perfect animal. A gelatinous particle, without necessary form and texture, becomes a stupendous fabric, so intricate and elaborate, though at the

same time perfect and complete, that human ingenuity and reason have toiled almost fruitlessly for thousands of years in investigating the progress. It has indeed been averred by some, that all the different organs of the animal in its complete state are original and distinct in the embryo, and are only unfolded and rendered more evident by its increase. This, surely, is not the case. The animal is certainly endowed with the power of completing itself; and can, from inorganized parts, produce an organized structure. The parts are only enveloped and perfected as they become useful in the different stages; and the evolution of many of them can be prevented without the destruction of life, or excessive prejudice to those already enveloped. If the different organs, or rather principle, are at first perfect, why are those effects which depend upon them not perfect also? why is the state of infancy a state of idiotism? why is the temper of youth capricious and flexible? and why the temper and passions of the adult but barely discernible in the preceding stages?

Being of opinion, then, that the different organs are matured only as they become requisite and necessary; consequently we consider that the evolution of the generative organs in both sexes must be among the last efforts of the increase and completion of the body. This evolution could not have taken place earlier. If it had, the mind must have been affected by such impulses as announce the maturation of these organs, by which we know the mind, body, and soul, are connected. In the male, the foundation and powers of maturation, of that strength, and of those more rational qualities which belong to him, are said to ripen with puberty: hence communication with the female, before these are finally arranged and secured, proves inefficient, and intails upon him debility both of body and mind. The same position holds,

as far as the same ends are concerned, with respect to the female ; and we cannot suppose that nature could be so idly eccentric as to punish the female with a disposition or propensity to procreate before the body were capable of undergoing the various disorders and dangers of pregnancy and parturition. For the same reasons, none of the ordinary organs of sense are qualified to receive or communicate distinct impressions, till the brain, the seat of the animal spirit, the heart, the seat of the vital spirit, as the liver is of the natural *, have acquired those properties which must fit them for their arduous offices. It is only when the different organs of sense have been completely evolved, and all their parts sound and just, that the power of the mind is effectuated and established. This faculty, though it seem essentially different from reason, is, no doubt, the origin of it ; for the extension of common sense from memory, or rather from comparison, and what may be called the balance of the senses, constitutes what are called reason and judgment. While the organs are incomplete, from infancy or from disease, their communication with the understanding is also incomplete. Those who have been born blind, or whose eyes have been destroyed in infancy, before they were become useful, have none of those ideas which depend upon the eye ; it is the same with the deaf, and in all cases of idea depending upon one sense : and we may add, the early castrated have no comprehension of, or propensity to, the gratifications of love. Do not these things shew (and a thousand other circumstances might be adduced to strengthen the proof) that the mind acquires its powers only as the parts of the body are unfolded and confirmed ; that the body is per-

* It is observable, that as long as these spirits are in harmony, so long the soul is confined to the body, but immediately that they are disunited, death is the consequence.

fectcd only as the mind is qualified to receive its impressions; and that the parts of the body are perfected by one another?

During infancy and youth, strictly, the ovaria are simple inorganic masses, partaking of no more life than is barely sufficient to sustain them, and connect them with that energy and progress of constitution which are afterwards to unfold all their properties. At the period of puberty, thus denominated from the change that takes place in the genital system at this time of life, this progress and development of the ovaria is finished by nature; and these bodies are generated and completed within them, which will exist without impregnation by the male, but which this impregnation alone can finally mature and evolve. That these bodies are not generated at an earlier date, anatomy, as well as reason, founded on the foregoing arguments, assure us; and, that the ova of all the fœtuses which the female is afterwards to produce are generated at that time, seems equally certain. Though this change in the ovaria is the most essential, the whole genital system also undergoes a very material change. The simple alterations of structure and dimension in the different parts of this system, though they are necessary and subservient to generation and parturition, yet they are not so material, either to our purpose, or in themselves, as to require a minute description. This, however, is not the case with respect to the menses. It is chiefly with a view to the nutrition of the fœtus that this extra-sanguification in the female is provided by nature; which is determined to the genital system, in the same manner as the other fluids are determined to other outlets; but as the continued drilling off of this extra blood would be exceedingly inconvenient and disgusting, nature has prepared, as it were, a cistern for its reception. What may be sufficient to bring on the
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the hæmorrhage, however, is only accumulated; and the general redundancy, induced by the obstruction and accumulation, subsides gradually as the hæmorrhage goes on. This is the manner of menstruation in the unimpregnated female, and these are the reasons why it assumes a periodical form. In the impregnated female, again, the preparation of extra blood still continues, but its consumption becomes very different. By the extension of the uterus, and the waste occasioned by the nourishment of the fœtus and its involucra, the surcharge, or extra preparation of blood is nearly balanced, or taken up as it is prepared; and hence the periodical efforts are almost lost. In the first months of pregnancy, however, the uterine system is not always able to consume the surcharge of blood, and thereby to take off the periodical effort; and hence it is that the loss of the fœtus happens most generally in the early months, and at the usual period of the menses, unless some accident has supervened. It is also nearly from the same reasons that miscarriage is so often to be apprehended in the latter months of pregnancy, and that the fœtus is afterwards expelled from the uterus. When the fœtus has acquired all that bulk and strength which the capacity and powers of the uterus can confer, and when a change of circulation and mode of life becomes necessary to it, the uterus and fœtus are rendered plethoric; a general accumulation succeeds; and the periodical efforts of the menses return. During the middle months of pregnancy the fœtus is in a state of rapid growth, and is capable of consuming all the blood which the mother can furnish; but there is neither room nor waste in the latter months for the blood which the mother is constantly pouring in; and hence arises that plethora, both in mother and child, which is to instigate the effort to parturition; which occasions the effusion after parturition;

turition; and which is to supply the extended circulation of the born child.

But, besides the utility of menstruation to the fœtus, there is a very evident connection between it and impregnation. To speak of it as a proof of the ripened qualifications of the female, is to say nothing; its immediate action is essential to conception. In the human female, it is well known, coition is almost only successful immediately after this evacuation has subsided. Who will reconcile this (and it is no modern and groundless observation) to the consequence which has been ascribed to turgidity and tension, which we have already adverted to? Almost every woman who has frequently undergone pregnancy, and who has attended judiciously to the phenomena of that situation, calculates from the last cessation of the menses. At this time, or rather very soon after, the plethoric tumult of the general system is completely subsided, and the absorbed semen gets quiet and unanticipated possession of the circulating blood; and at the same time the gradually returning plethora promotes its action, and perhaps its determination to the ovaria. When the menses are interrupted, or profuse and frequent, impregnation seldom takes place; and it does not admit of a doubt, that when the determination of this blood is towards the mammæ, in the form of milk, coition is unsuccessful; and as soon as its determination to the uterine system is restored, other things being favourable, copulation succeeds. We may add, as a known fact, that continuing to give suck after the usual period will occupy the plethora, and prevent its determination, in the form of blood, to the uterine system. It is an additional reproach to the grossness of human nature, that this practice hath too often been put in execution in order to obviate conception. Sometimes, there is reason to believe, conception has taken place while the plethoric determination

termination to the breasts continued. I am rather disposed to believe, that in such cases its return to the uterine system was recommenced; for about the same time the milk generally loses its nutritious and alimentary qualities, and gradually decreases.

But we have said enough to describe and substantiate those parts of the female, which puberty has prepared for generation. We shall now consider its operation on the male. It need not be repeated, that the seminal fluid is an exceedingly penetrating and active fluid. Its effects, after it is generated, even upon the male, demonstrate its activity and influence, far beyond the precincts wherein we believe it to be accumulated. After puberty, its secretion, even during indifferent health, is continually going on; and those collections of it in its reservoirs, which are not thrown out by venereal exercise, or by other means less decent, are resorbed and mingled with the general mass. What is actually resorbed about the period of puberty, before the system has been habituated to, or saturated with it, produces very curious and remarkable effects throughout the whole frame. The flesh and skin, from being tender, delicate, and irritable, become coarse and firm; the body in general loses its succulency, and a new existence seems to take place. The voice, a proof of the tension and rigidity of the muscular fibres, losing its tenderness and inequalities, becomes ungratefully harsh; and the mind itself, actuated by the progress of the body, and forgetting all its former inclinations and attachments, acquires distinctly new propensities and passions. These changes are not entirely the effect of ordinary progressive age and strength; neither are they promoted by intercourse with the world; for castration will anticipate them, and premature venery, or even gradual familiarity, and early onanism, will diminish them.

them. Boys who have been subjected to castration, never acquire either that strength of body nor capacity of mind which dignifies the complete male; and the same cruel and unnatural operation performed on brute animals, diminishes their bodily strength, their courage, their liberty, and the fierceness of their temper.

If such are the effects of the feminal fluid when resorbed by the male, how powerful must it be when suddenly mingled, and most probably in greater quantity, with the circulating fluids of the attracting female! Coition, or rather the asorption of the feminal fluid of the male by the female, even when not succeeded by impregnation, induces an alteration very general over the female system. The local influence of which may be inferred from the general change which it is capable of inducing during complete health; from the relief which it effectuates in many species of disease; and from the general vivacity and cheerfulness diffused over the whole animal frame. It would be prolix to go over every disease which will warrant those opinions; yet, in the eye of common observation, the fallow and inanimate female, by coition, often becomes plump and robust, beautiful and active; whilst the widow, or married woman deprived of commerce with her husband, gradually returns to the imperfections and peculiarities of single life; and the ancient virgin, all her life deprived of this animating effluvia, is generally consumed with infirmity, ill temper, or disease. It is well known too, that the want of coition at the time of life when nature seems to require it, lays the foundation of many disorders in females; and that the use of it removes these and even other diseases. Chlorosis, or the whites, almost always attacks females immediately after puberty; and even when the violence of its symptoms have not been discerned

cerned till a later period, its origin can always be traced back to that time. When the human system is completely evolved, and all its parts have acquired their full growth, a balance is produced between the circulating and solid systems; though, from the ideas we have suggested concerning the menses, this balance in the female cannot strictly be called complete. It is only complete in her when in perfect health, and in an impregnated state. At other times, the *catamenia*, as preponderating against the powers of the solid system, in proportion to their degree of the period, disturbs the equilibrium, and thereby, more or less, induces a state inconsistent with perfect health. But when the propelling power of growth has ceased before the solids, either from actual disease, or want of uniformity in either period or accession with respect to the progress of the circulating system, have acquired their proper vigour and tone, and when the *catamenia* has assumed its destination before it is accompanied by the general as well as local energy which is requisite to expel it, an universal want of balance comes on; the blood loses its stimulating influence on the vitiated solids, and these, in their turn, act feebly on the distempered blood. Accordingly, in the cure of this disease, no matter whether adopted from particular theories or from experience, medicines are directed to restore vigour to the solids, and consistence and stimulus to the circulating mass*. Nature proceeds in the same manner; and the beneficial effects of coition in the cure of this disease have been too material to escape observation. It may be alleged, that these effects depend entirely upon local influence; and that even voluptuous gratification, by quieting the turbulence of passion, is of

* The Doctor's reanimating Solar Tincture is particularly adapted to accomplish all these various purposes, with desired effect.

consequence towards effecting the cure. We shall not say that these things are unavailing; for it appears, that the relief obtained is chiefly owing to the increased intestine motion, and consequent stimulus, communicated to the blood by the absorbed semen, by which the solids themselves are ultimately restored: and we are the more confirmed in this opinion, because all these fortunate circumstances attend, whether coition be succeeded by impregnation or not. Hysterics, and other diseases, would furnish us with similar explanations, and similar cures.

Let us now advance a little nearer our object. It is beyond a doubt that, in whatever manner the semen acts upon the female, it does not act suddenly, notwithstanding the general assertions of many authors. However productive coition may be, the fecundated product of the ovaria is not immediately disengaged. We dare not avouch this fact from observations made on the human subject, because such observations never have been attempted, nor ever can with the smallest probability of success: but the dissection of brutes, by the most eminent anatomists, with a direct view to the elucidation of this fact, ascertains it, as far as such evidence can be admitted. In the dissection of small animals, by De Graaff, he found no discernible alteration in the uterus during the first forty hours after coition, but a gradual change was perceptible in the ovaria; and what he supposed the ripened origin of the future animal, at the end of that time, losing its transparency, became opaque and ruddy. After that time, the fimbriæ were found closely applied to the ovaria; the cavities whence the ova had been expressed were discernible; and about the third day the ova were discovered in the uterus. In large animals, and in those whose time of uterine gestation was longer, it was found that the progress which we have been describing was proportionably slower.

flower. The same experiments have been made by different anatomists, and perhaps with different views; and though they have not always been managed with the same judgment and dexterity, yet all of them more or less confirm the idea that there is a very considerable lapse of time intervening between productive copulation and the expulsion of the ovum from the ovaria. But if this is the case with animals which soon arrive at puberty, and which, like human creatures, copulate not perfectly before puberty; whose lives are short, and progress in equal periods of time more rapid than those in man; by parity of reason it must happen that in women the period between impregnation and the expulsion of the fecundated product of the ovaria must be considerably greater than what has been observed to take place in these animals. If all this be true, how are we to suppose nature to be employed during this interval? We believe it is during this period that the whole female constitution is labouring under the fecundating influences of the seminal fluid taken into the blood by the absorbents; while the ovaria are largely participating, and their product ripening, by means of the general stimulating process. And the same process which maturates the ovum tends to facilitate its exclusion. The ovaria, as well as their product, are at this time enlarged, and other changes, subject to the examination of our senses, induced. It is no proof against the reality of this general alteration in the circumstances of the circulating system, and consequent revolution in the ovaria, that the whole is accomplished with but little visible disturbance, either local or universal. In other cases of material alteration in the mass of blood equal quietness and obscurity prevail. In scrofulous or scorbutic taints; in the inoculated small-pox, or when they are produced by contagion; the poison silently and slowly diffuses itself throughout the whole mass, and

and a highly morbid state is imperceptibly induced. Thus an active and insinuating poison intimately mixes itself with all the containing, perhaps, as well as contained, parts, perverts their natures, and is ready to fall upon and destroy the very powers of life, before one symptom of its action or of its influence has been discerned. It is the same in a confirmed lues; it is even more remarkable in the hydrophobia derived from the bite of a mad dog; and the whole round of contagious diseases have the same unalarming, yet certain, progress and termination.

That the final influence of this elaborate process should be determined particularly, and at all times, to the ovaria, is no way marvellous. To qualify the ovaria for this, they are supplied with a congeries of blood-vessels and nerves, at puberty larger and more numerous than what is allotted to any other part of similar magnitude. Were the ovaria merely a receptacle for the ova, which the venereal orgasm, communicated by the nerves, or by the impulsion of the applied semen, was to lacerate; what use would there be for so intricate and extensive an arrangement of blood-vessels and nerves? But we may further remark, that every distinct process in the human body, either during health or disease, tends to one particular and distinct purpose. The kidneys do not secrete bile, nor does the liver strain off the useless or hurtful parts of the blood, which are destined to pass off by the emulgents; neither do the salivary and bronchial glands promiscuously pour out mucus or saliva: the variolous virus does not produce a morbilious eruption, syphilitic caries, or scrofulous ulcer; why then would the fecundated blood unconcernedly and promiscuously determine its energy to the skin, the lymphatics, or the substance of the bones? We know none of the operations in the human body, destined for the ordinary purposes

poses of life and health, or for the removal of disease, but in a greater or less degree involve the machinery of the whole system. A single mouthful of food, while it is prepared, purified, and applied to its ultimate purposes, is subjected to the action of all the known parts of the body, and without doubt to all those parts with the properties of which we are unacquainted; a draught of cold water spreads its influence almost instantaneously from one extremity to the other; the slightest wound disturbs even the remotest parts, and is followed, not unfrequently, with the most unhappy effects; an almost invisible quantity of poison sets the whole frame in torture, and all the active powers of the body instinctively exert themselves to solicit its expulsion. Can we distinguish these things, and admire them, and then suppose that the most material operation of the human body, the renovation of itself, is to be accomplished in a corner, and with infinitely less formality and solemnity than a spittle is cast upon the wind? The evident means are sufficiently degraded; we need not exert our ingenuity to degrade them further.

It is during this interval, between productive coition and the exclusion of the ovum from the ovaria, that likenesses, hereditary diseases, and the like, are communicated and acquired. Instead of that influence which the imagination of the mother is supposed to possess over the form of the child, might we not suspect that the seminal fluid of the male, co-operating during this interval with the influence of the female upon the ovum, instigated a likeness, according to the influence of the male and female tinctures, in the united principles? It is during this period only that the diseases of the male can be communicated to the child; and if we admit not of this interval and general operation of the seminal fluid, we cannot see how they can be communicated, though those of the
mother

mother may be communicated then or at a much later period, considering how the child is nourished while it is in the uterus and at the breast. It may be urged against this early and effectual acquisition of likeness, that the foetus does not acquire even the division of its largest members till long after its exclusion from the ovaria: but then we are confident that as the foetus takes all its form and other properties from the active subtilty of these blended tinctures, we cannot see any reason why it should not possess this hereditary faculty, in common with the rest. If likeness depends upon the imagination of the female, how happens it that the children of those whose profligate manners render the father uncertain, and whose affections cease with the instant of libidinous gratification, are as frequently distinguishable by their likeness as those children who have been born under none of those misfortunes? If the features are not planted during this period, and if imagination be not idle or useless, how was the six-fingered family, mentioned by Maupertuis, continued? When a female of that family married a man who had only the usual number of fingers, the deformity of her family became uncertain, or ceased; and we must suppose her imagination could not have been inactive or diminished, whether alarmed by the fear of continuing a deformed race, or instigated by the vanity of transmitting so remarkable a peculiarity. Were imagination, in a pregnant woman, so powerful as many have endeavoured to represent it, the mother, profligate at heart, though not actually wicked, would always betray the apostacy of her affections; and even a virtuous woman might divulge that she had looked with as much eagerness at a handsome stranger as she had looked at the aquiline nose, or other prominent feature, of her husband.

But admitting that the seminal fluid of every
male

male possesses some kind of influence peculiar to that male, and connected with his form, as well as his constitution; in the same, or in some similar manner, it contains, notwithstanding the elaborateness of its preparation, the stamina of diseases, some of which often lie longer dormant than even the features of individuals; that the ova are as peculiarly constructed, by the constitution of the female as any other parts which depend upon gradual and solitary evolution; and that these, operating upon each other by the intervention of the general system of the female, may, according to the power or prevalence of either, affect the features and figure of the incipient animal, or rather the inorganized mass from which the features and figure of the animal are afterwards to be evolved: admitting all these things, will national or even more extensive similitude corroborate the opinion?

We shall have occasion to remark that the preservation and continuation of the particular species appear to proceed from that parent who in the act of procreation has discovered most strength and vigour, and this is commonly the father. A young negro woman, in Virginia, after having brought forth for the first time a black child, was delivered a second time of twins; one of them, a boy, was black, and the other, a girl, was a mulatto. As the boy grew up, he retained his short hair, which was naturally frizzled, and had a resemblance to wool; other marks plainly shewed that he was a true negro, and in every respect like the black father who had begotten him. The girl, on the other hand, was tolerably white; she had blue eyes, long black hair, without any natural curl; in short, she had a great resemblance to the overseer of the plantation, whom the negro husband suspected of cohabiting with his wife. Becoming pregnant a third time, she was delivered of three children,

children, two of them mulattos; and the other a perfect negro.

Shall we ascribe this to the effect of imagination? such an explanation is rejected by the philosopher, as absurd, and contrary to every law of nature.--- We can account for the third delivery, therefore, only by admitting the cohabitation of two fathers, of different races, and then a superfœtation.

While men continue in the same climate, and even in the same district, an uniform peculiarity of features and figure prevails among them, little affected by all those changes which improve or degrade the mind; but when they migrate, or when they are corrupted by the migration of others, this national distinction in time is lost, though in the latter case it seems to be recoverable, unless the cause of change be continued.--- The beautiful form and features of the ancient Greeks are at this day discernible in their descendants, though they are debased by intercourse with strangers, and by forms of government ultimately affecting their constitutions; the descendants of the few who by chance or design have been obliged to settle among the ugly tribes in the extremities of the north, have by their intercourse with these tribes, and by necessarily accommodating themselves to the same modes of life, besides other circumstances, become almost equally ugly; and the Jew himself, though he abhors to mingle with a different nation, and though his mode of life is nearly the same in all climates, yet the settlement of his ancestors in any one particular climate, for some centuries, will very sensibly impair the characteristic features of his people. As equally in point, and less liable to question, we may mention the following similar observations: a Scotchman, an Englishman, a Frenchman, or a Dutchman, may, even without their peculiarities of dress, be almost always distinguished in their very pictures; the sturdy and generous

generous Briton; notwithstanding the shortness of the period, and the uninterrupted intercourse, as traced with uncertainty in the effeminate and cruel Virginian; and the negroes in North America, whose families have continued since the first importation of these unhappy créatures, and whose modes of living, exclusive of their slavery, are not materially changed, are much less remarkable for the flat nose, big lips, ugly legs, and long heels, than their ancestors were, or than those who are directly imported from the same original nation. From these observations it seems allowable to infer that though climate, manners, occupation, or imitation, cannot materially affect the form or features of the existing animal; yet these circumstances, becoming the lot of a series of animals, may, by inducing a change in the general mass both of the male and female, be the remote cause of a change in their product.

After what has been premised, it seems rational to conclude, that the prolific fluid, in coition, is neither carried through the Fallopian tubes, nor protruded through the aperture of the uterus, to the ovaria; but that it is taken up by the absorbent vessels, and conveyed into the sanguiferous system; where, indeed, every active principle that can possibly affect the human constitution is also conveyed. That by circulating through the blood, it is, by its natural impulse, and the additional stimulus acquired from the mother, forced through the corresponding vessels into the ovaria, where if it find one or more of the ova in a state fit or ripe for impregnation, conception takes place accordingly; and either one or more are impregnated, as the matured state of the ovaria should happen to be. But if none of the ova or eggs are in a state sufficiently mature, or chance to be injured by any offending humours, by debility, or disease; in either of these cases impregnation is frustrated, just

the same as often happens to an addled egg, or to a damaged grain of corn thrown into the earth.

On the other hand, if the male organ be deficient in vigour, or the semen be defective in quantity, consistency, or active power, it then fails of stimulating the female fluid, and is incapable of influencing impregnation. In order therefore that the act of copulation should be productive, the male must unquestionably convey to the female an elaborate tincture, which possesses the essences of his whole system, as well mental as corporeal*: in this act, the utmost energy and powers of the mind or the body, and of the soul, are intimately connected; and all contribute their particular influence to the seed; of which every father must be sensible when he recollects the action of the heart, the seat of life; of the brain, the seat of the intellect; and of the whole powers of the body, concentrated and impelled, as it were, through the genital system.--- That this liquor comprehends the active principles of body and soul, will not, I think, be doubted by those who give the foregoing arguments their proper weight; and that it conveys with it, more or less, the direct image of the parent, I take to be confirmed by the evidence of the scripture, where we are told that one absolute and unequivocal form was given to man, in the express image of the Deity. So that man, thus organized and commissioned, was doubtlessly to convey to future generations that divine image or signature which God had graciously stamped upon him. For this purpose the seed of man, or efficient princi-

* These essences are derived from the four principal members, viz. the brain, heart, liver, and testicles. The brain, the seat of the animal and intellectual soul; the heart, of celestial heat, or vital spirit; the liver and kidneys, the seat of natural and elementary power; and the testicles, the reservoir, or principle that propagates animal life and celestial virtue. The constituent parts proceed from these, and from these the other members are derived.

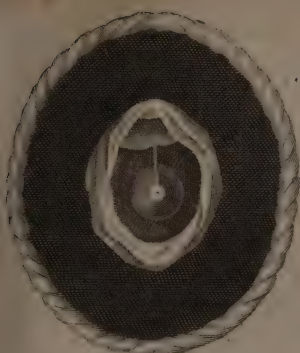
ple of generation, must be mingled with the vegetative fluid of the female; and being attracted or taken up by the absorbent vessels from the uterine canal, passes immediately into the circulating system, where assimilating with the peculiar temperature of the mother, and acquiring new energy from the enlivening quality of the blood, it is directed through its natural channels to the ovaria, impregnating the germ by its active quality, and conveying to it the peculiarities it had derived from the constitutions, forms, tempers, and dispositions, of the parents, with the seeds of whatever diseases, impurities, or taints, were lurking in their blood: for from the blood and brain is the male seed primarily elaborated, and into the female mass is this thrown and assimilated, before impregnation can possibly take place. In the course of six days, I conclude the united tinctures to have travelled through the whole circulating system; to have participated of the hereditary forms and peculiarities of the mother; and to have propelled the ovum or egg from its seat in the ovaria to a suspended situation in the uterus, hanging by a minute thread, that afterwards becomes the umbilical vessel, or aperture through which nourishment and life is conveyed from the mother to the child. This first visible state of conception, which resembles the lucid appearance of a drop of water tending to coagulation, is correctly shewn in the first figure of the annexed plate, precisely in the state it was extracted from the uterus of a female who died on the sixth day after contact with the male, and is now to be seen, preserved in spirits, at Rackstrow's valuable Museum, in Fleet-street, London.

At the time the ovum, or rudiments of the embryo, descends into the uterus, it is indeed very minute; and for the first six days appears to partake of the nature of cream; after this period, in the space of nine days, it assumes a blood colour, with
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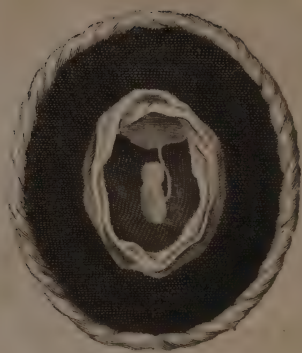
a degree of consistence; and at the end of twelve ensuing days, it is so far altered that we may partly discover the first lineaments of the fœtus, though small and imperfect, being then only about the size of a house fly. Two little vesicles appear in an almost transparent jelly; the largest of which is intended to become the head of the fœtus, and the other smaller one is destined for the trunk; but neither the limbs nor extremities are yet to be seen; the umbilical chord appears only as a minute thread, and the placenta, which only resembles a cloud above, has no ramifications, or appearances of blood-vessels; but in proportion as this transparent and delicate jelly thickens, it loses its transparency, and there appears distinguishable in it a little speck, more firm, though opaque, which differs from a cartilage, and already partakes of the nature of bones, but without hardness. The speck may be termed the nucleus of the bone, which is going to form the centre from which ossification proceeds, till it reaches the circumference. Here it is to be observed, that four elements introduce into the composition of the body such parts as are correspondent to heat and moisture, hardness and elasticity. This state of the embryo is expressed in the second figure of the annexed plate.

Towards the end of the second month, the fœtus is upwards of an inch in length, and the features of a face begin to be evolved. The nose appears like a small prominent line; and we are able to discover another line under it, which is destined for the separation of the lips. Two black points appear in the place of eyes, and two minute holes mark the formation of the ears. At the sides of the trunk, both above and below, we see four minute protuberances, which are the rudiments of the arms and legs, and are disposed of according to the threefold dimensions of length, breadth, and depth; the fœtus then continues to

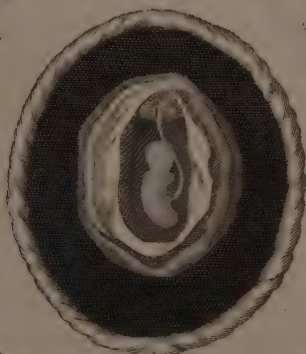
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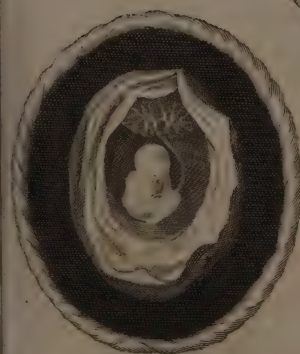
Conception.



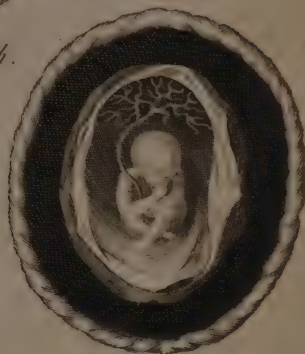
First Month.



Second Month.



Third Month



Fourth Month.

Formation of the Human Fetus.

collect strength in the bony germ, by which we are enabled to judge what will be the form of the bones when they shall have arrived to perfection. In the small simple bones, is to be discovered only one single nucleus: in the greater, and in such as are gross and angular, we find several springing in different places from the primitive cartilage; but in this last case, the number of pieces of which the bone is to be composed is the same as that of the nuclei; and all these pieces are perfectly arranged and proportioned. In the bones of the skull, the round nucleus appears at first in the centre of every piece, and the ossification extends afterwards in all directions, by means of an infinite number of fibres which the bony speck sends forth in form of rays, which lengthen, thicken, and harden; and, by degrees, unite by a membranous contexture. This is the first epoch of ossification: the veins also of the placenta are now partly visible, as may be seen in No. 3 of the annexed plate.

In the third month, the human form may be decidedly ascertained; all the parts of the face can be distinguished: the shape of the body is clearly marked out; and the haunches and the abdomen are elevated, and the hands and feet are plainly to be distinguished. The upper extremities are observed to increase faster than the lower ones; and the separation of the fingers may be perceived before that of the toes; and all the parts in general assume a form more perfect and more distinct in proportion as the ossification progressively gains upon the whole cartilage, and according to the greater or less vivacity which characterizes the fœtus before it sees the light. The veins of the placenta are now distended, and are seen to communicate with the umbilical tube. This state of gestation is faithfully delineated in No. 4 of the annexed engraving.

In the fourth month, the fœtus seems to be completed

pleted in all its parts, and is about four inches in magnitude. The fingers and toes, which at first coalesced, are now separated from each other, and the intestines appear, in all their windings and convolutions, like little threads; and the second epoch of ossification is beginning to take place; and what remains cartiliginous of the newly formed bone of the foetus diminishes, and the bony part formed by the first epoch of ossification advances gradually to perfection. The veins of the placenta begin to be filled with blood, and the umbilical chord is considerably enlarged; as may be seen in the fifth figure of the subjoined plate.

In the fifth month, the bodily conformation being perfected, the small bones which constitute the organ of hearing, acquire firmness and solidity much faster than those of any other part of the foetus; and a complete circulation of the blood having been induced, the mother quickens. The foetus now assumes a more upright figure, which corresponds with the shape of the uterus. Its head is found more elevated, its lower extremities are more distended, its knees are drawn upwards with its arms resting upon them. It now measures from seven to eight inches in length, and is described in the first figure of the second subjoined plate.

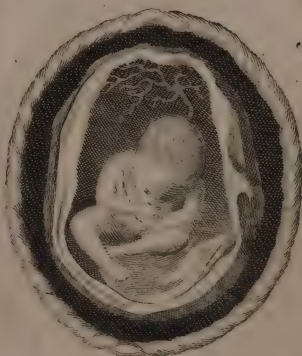
Towards the end of the sixth month, the foetus begins to vary its position in the uterus, and will frequently be found to incline either to the right or the left side of the mother; for the head is much too large for the other parts of the body, and although the head be soft and flexible, yet its internal surface is intersected by a great number of furrows, canals, and inequalities; and by examining the bones of the other parts of the body may be perceived a great number of vessels which convey to them the marrow and nutritive juices. It will by this time be increased to nine or ten inches; and its usual posture after quickening may be



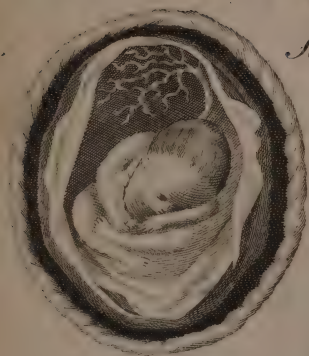
Fifth . Month.



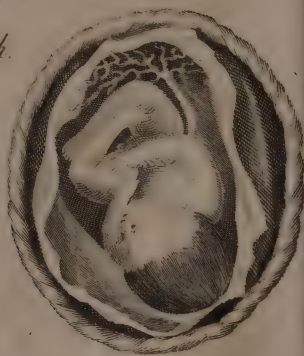
Sixth . Month.



Seventh . Month.



Eighth . Month



. Ninth . Month.

Formation of the Human Fœtus.

be seen in the second figure of the second annexed plate.

In the seventh month, the child acquires strength and solidity, as may be demonstrated by those painful throes and twitchings which its mother feels from time to time. The bones now acquire solidity, and the cavity of the skull is visibly fitted to the mass of the substance which it contains. Thus the exterior form of the brain, which imprints itself perfectly on the internal surface of the skull, is at the same time the model of the contours of the exterior form; and the conjunction of the several parts of the skull produces afterwards those indented seams so justly the object of admiration. It is not impossible for children to live if born at this time, but it is not frequent. I have attended labours of this description, where it has been the case; but the child seldom or never measures more than eleven or twelve inches.

In the eighth month, the whole human economy is complete; the arteries and nerves appear visible, and nature only requires its due time to strengthen the muscular system, which advances daily to a state of perfection: it is possible, by an extensive practice, to determine the age of the fœtus by the inspection of its bones, &c. In this month, the external surface of its body is intersected by a great number of furrows, canals, and inequalities, by the continual pressure of the blood in its revolution through the arteries and veins. It measures from fourteen to sixteen inches; and in the ninth month, or towards the end of its full time, it is increased from eighteen to twenty-two inches, or more; when the head, by becoming specifically heavier than the other parts, is gradually impelled downwards, and falling into the birth, brings on what is termed the pains of parturition, or natural labour. For the exact position of the fœtus in the uterus during these last three months,

as well as the former, see the corresponding figures in the two annexed engravings, the whole of which were correctly drawn from real fœtuses, extracted from the uterus of different women, and are now preserved for the inspection of the curious, in Rackstrow's Museum, to which I beg leave to refer the inquisitive reader*.

The nourishment of the fœtus during all this time is derived from the placenta, about six inches diameter, and the funis, twenty-seven inches, which is originally formed out of that part of the ovum next the fundus uteri. The remaining part of the ovum is covered by a membrane, called *spongy chorion*; within that is another, called *true chorion*, which includes a third, termed *amnios*: this contains a liquor, or watery fluid, in which the fœtus floats till the time of its birth. Before the child acquires a distinct and regular form, it is called *embryo*; but from the time all its parts become visible it takes and retains the name of *fœtus* till its birth. During the progress of impregnation, the uterus suffers considerable changes; but though it enlarges as the ovum increases, yet, in regard to its contents, it is never full; for in early gestation these are confined to the fundus only; and though the capacity of the womb increases, yet it is not mechanically stretched, for the thickness of its sides do not diminish; there is a proportional increase of the quantity of fluids, and therefore pretty much the same thickness remains as before impregnation. The gravid uterus, or pregnant womb, is of different sizes in different women, and must vary ac-

* The fœtus is observed to be of the following different weights, according to Mauriceau, a famous French physician: from the first day of conception, it cannot weigh more, or be bigger, than a millet-seed; at ten days, it weighs half a grain; at one month, half a drachm; at three months, three ounces; at seven months, four pounds; at eight months, from seven to eight pounds; but at nine months, about twelve pounds.

According to the bulk of the foetus and involucre. The situation will also vary according to the increase of its contents, and the position of the body. For the first two or three months, the cavity of the fundus is triangular, as before impregnation; but as the uterus stretches, it gradually acquires a more rotund form. In general, the uterus never rises directly upward, but inclines a little obliquely, most commonly to the right side: its position, however, is never so oblique as to prove the sole cause either of preventing or retarding delivery; its increase of bulk does not seem to arise merely from distention, but to depend on the same cause and increase as the extension of the skin in a growing child. This is proved from some late instances of extra-uterine foetuses, where the uterus, though there were no contents, was nearly of the same size, from the additional quantity of nourishment transmitted, as if the ovum had been contained within its cavity. The internal surface, which is generally pretty smooth, except where the placenta adheres, is lined with a tender efflorescence of the uterus, which after delivery appears as if torn, and is thrown off with the cleanings. This is the *membrana decidua* of Dr. Hunter; which he describes as a lamella from the inner surface of the uterus; though Signor Scarpa, with more probability, considers it as being composed of an inspissated coagulable lymph.

Though the uterus, from the moment of conception, is gradually distended, by which considerable changes are occasioned, it is very difficult to judge of pregnancy from appearances in the early months. For the first three months the os tincæ feels smooth and even, and its orifice as small as in the virgin state. When any difference can be perceived, about the fourth or fifth month, from the descent of the fundus through the pelvis, the tubercle, or projecting part of the os tincæ will seem larger;

and more expanded; but after this period it shortens, particularly at its fore-parts and sides, and its orifice or labia begin to separate, so as to have its conical appearance destroyed. The cervix, which in the early months is nearly shut, now begins to stretch and to be distended to the os tincæ; but, during the whole term of utero-gestation, the mouth of the uterus is strongly cemented with aropy mucus, which lines it and the cervix, and begins to be discharged on the approach of labour. In the last week, when the cervix uteri is completely distended, the uterine orifice begins to form an elliptical tube, instead of a fissure, or to assume the appearance of a ring on a large globe; and often at this time, especially in pendulous bellies, disappears entirely, so as to be out of the reach of the finger in touching. Hence the os uteri is not in the direction of the axis of the womb, as has generally been supposed.

About the fourth, or between the fourth and fifth, month, the fundus uteri begins to rise above the pubes or brim of the pelvis, and its cervix to be distended nearly one-third. In the fifth month the belly swells like a ball, with the skin tense, the fundus about half-way between the pubes and navel, and the neck one-half distended. After the sixth month, the greatest part of the cervix uteri dilates, so as to make almost one cavity with the fundus. In the seventh month, the fundus advances as far as the umbilicus. In the eighth, it reaches midway between the navel and scrobiculus cordis; and in the ninth, to the scrobiculus itself, the neck then being entirely distended, which, with the os tincæ, becomes the weakest part of the uterus. Thus, at full time, the uterus occupies all the umbilical and hypogastric regions; its shape is almost pyriform, that is, more rounded above than below, and having a stricture on that part which is surrounded by the brim of the pelvis. The appendages of the
uterus



*The Amnion. B. The external part of the Placenta covering the Amnion,
 Placenta Uterina. D. Umbilical Vessel from the Placenta to E. the
 Liver of the Fœtus. —*

uterus suffer very little change during pregnancy, except the ligamenta lata, which diminish in breadth as the uterus enlarges, and at a full time are almost entirely obliterated.

I shall now endeavour to describe the action of quickening, or mode by which life is communicated to the child in the uterus, which usually takes place in the fifth month of pregnancy. Opportunities, however, of dissecting the human gravid uterus at or near this critical juncture occurring but seldom, it is with great difficulty that a subject of this delicate and abstruse nature can be treated with perspicuity, and is the principal cause why it has not been attempted by former physiologists. I have already shewn, that the rudiments of the embryo puts forth four membranes, viz. the placenta, the navel-string, the chorion, and amnios (see the plate) that contain the fluid abovementioned, in which the foetus floats. Until the period of quickening arrives, the embryo possesses only vegetative life, similar to that of a common plant; and its growth is nourished and preserved by the fluid in which it swims, until the nerves, veins, arteries, and vital organs, are entirely formed, and the circulation of its mother's blood is completed through them, which is conducted in the following manner:

The placenta is the medium by which the blood from the heart of the mother is communicated to that of the child; but to check its too rapid progress, which would overwhelm the tender vessels of the infant frame, the texture of the placenta is formed similar to that of a sponge, round like a cake, of considerable dimensions, and capable of great absorption, being chiefly made up of the ramifications of the umbilical arteries and veins, and partly of the extremities of the uterine vessels. The arteries of the uterus discharge their contents into the substance of this cake: and the veins of the

the placenta, receiving the blood either by a direct communication of vessels, or by absorption, at length form the umbilical vein, which passes on to the sinus of the vena porta, and thence to the vena cava and heart of the infant, by means of the *canalis venosus*, a communication which is closed up in the adult. But the circulation of the blood through the heart is not conducted in the foetus as in the adult: in the latter, the blood is carried from the right auricle of the heart through the pulmonary artery, and is returned to the left auricle by the pulmonary vein; but a dilatation of the lungs is essential to the passage of the blood through the pulmonary vessels, and this dilatation cannot take place till after the child is born, and has respired. This deficiency is therefore supplied in the foetus by an immediate communication between the right and left auricle, through an oval opening in the septum which divides the two auricles, called *foramen ovale*. The blood in the foetus is likewise transmitted from the pulmonary artery to the aorta, by means of a duct, called *canalis arteriosus*, which, like the *canalis venosus* and *foramen ovale*, gradually closes after birth. The blood is returned again from the foetus to the mother, through two arteries, called umbilical arteries, which arise from the iliacs. These two vessels, taking a winding course with the vein, form with that, and the membranes by which they are surrounded, what is called the umbilical chord. These arteries, after ramifying through the substance of the placenta, discharge their blood into the veins of the uterus, in the same manner as the uterine arteries discharge their blood into the branches of the umbilical vein. So that, after quickening, the blood of the mother is constantly passing in at one side of the placenta, and out again at the other, for the nourishment of the child.

Now what we call the *action of quickening* is that
instantaneous

instantaneous, yet undescribable motion of the vital principle, which, the instant the foetus has acquired a sufficient degree of animal heat, and is completely formed in all its parts, rushes like an electric shock, or flash of lightening, conducted by the sanguiferous and nervous fluids, from the heart and brain of the mother, to the heart and brain of the child. At this moment the entire circulation begins; the infant fabric is completely set in motion and the child becomes a living *soul*. As soon, therefore, as the circulation commences, the child starts into life; and the instant the circulation ceases, life ceases also. This *act of quickening* is therefore derived from the blood, and is so sensibly felt by the mother, that she often faints, and feels an internal depression of her animal and vital powers, which may be said, in some measure, to have departed from her. But the act of quickening does not take place in all women at the same period, nor always in the same woman at the same distance of time from her conception; nor is it governed by any given number of weeks or days after conception has taken place; but depends entirely on that instant of time when the joint influence of animal heat, and an entire completion of the nerves, veins, arteries, and other parts and organs, of the foetus, are fitted and ready to receive and support a due circulation of the blood and juices; for this, and this alone, is the source of quickening, and the beginning of animal life. Strong and healthy women will therefore quicken sooner than the weak and delicate, by reason that their procreative and stimulative powers are more robust, and can sooner contribute that portion of animal heat which is necessary to the entire completion of the foetus in all its parts; and which will happen sooner or later, according to the health and strength of the pregnant woman, and her sufficiency of menstrual blood to support the demand. For this

flux

flux will now be wholly taken up by the new subject, until the hour of birth; after which it either renews its monthly evacuation, as being redundant in the mother; or, if she suckles the child, it is then determined to the mammæ, and is converted into milk.

Such is this curious and most admirable contrivance of nature, for the reproduction and propagation of mankind; and such the nature and event of that mysterious action of quickening, which has hitherto been involved in so much darkness and obscurity, as to lead the unthinking multitude to suppose, that giving life to the fœtus, was in every instance a new and distinct interposition of the Deity, instead of religiously imputing it to that primary exertion of his omnipotence, which in the original formation of Adam, implanted in his nature the power of reproducing his like, and of imparting life and soul to his species, by a fixed and immutable decree, to be continued down from father to son, to the final end and consummation of this sublunary world. If the seed of Adam had not been originally endued with the gift of imparting life and spirit to his future generations, how could the souls of his descendants be subjected to original sin? Were any one child, descended from the race of Adam, to receive the gift of life and soul from a subsequent exertion of the power of God, it would become a new and distinct act of creation, and the offspring could not possibly be contaminated by the fall, nor be subjected to the miseries and misfortunes resulting from it, as having received its being from an independent cause.

I have, to the best of my ability, endeavoured to illustrate this occult process of nature, by means of the annexed copperplate engraving, taken from a drawing of the viscera and uterus of an unfortunate female, who fainted and died at the time of quickening; the fœtus itself being now preserved
in



W Newman Sculp^r

The Action of Quickening.

Published as the Act. on the 1st of July 1795 by E. Sibly.

in spirits. The structure of the gravid uterus is, however, extremely difficult to be shewn, and the more so under these peculiar circumstances. In the uterus of women who die after this period, or at the time of labour, or soon after delivery, fibres running in various directions are observable, more or less circular, that seem to arise from three distinct origins, namely, from the place where the placenta adheres, and from the aperture and orifice of each of the tubes; with all the veins and vessels communicating to and from the placenta and the mother surcharged with blood; but it is almost impossible to demonstrate regular plans of vessels and fibres, continued to any length, without an interruption which involves us in doubt, and destroys that view of the admirable connection which nature has formed between the vital organs of the mother and child in a state of advanced pregnancy.

The various diseases incident to the uterine system, and other morbid affections of the abdominal viscera, in weak and sickly females, will frequently excite the symptoms, and assume the appearance, of real pregnancy. Complaints arising from a simple obstruction are sometimes mistaken for those of breeding; when a tumour about the region of the uterus is also formed, and gradually becomes more and more bulky, the symptoms it occasions are so strongly marked, and the resemblance to pregnancy so very striking, that the ignorant patient is often deceived, and even the experienced physician imposed on.

Schirrous, polypous, or sarcomatous tumors, in or about the uterus or pelvis; dropsy or ventosity of the uterus or tubes; steatoma or dropsy of the ovaria, and ventral conception, are the common causes of such fallacious appearances. In many of these cases the menses disappear; nausea, retchings, and other symptoms of breeding, ensue; fla-

tus in the bowels will be mistaken for the motion of the child; and in the advanced stages of the disease, from the pressure of the swelling on the adjacent parts. Tumefaction, and hardness of the breasts supervene, and sometimes a viscid or serous fluid distils from the nipple; circumstances that strongly confirm the woman in her opinion, till time, or the dreadful consequences that often ensue, at last convince her of her fatal mistake.

Other kinds of spurious gravidity, less hazardous in their nature than any of the preceding, are commonly known by the names of *false conception* and *moles*: the former of these is nothing more than the dissolution of the fœtus in the early months; the placenta is afterwards retained in the uterus, and from the addition of coagula, or in consequence of disease, is excluded in an indurated or enlarged state; when it remains longer, and comes off in the form of a fleshy or schirrous-like mass, without having any cavity in the centre, it is distinguished by the name of *mole*. Mere coagula of blood, retained in the uterus after delivery, or after immoderate floodings at any period of life, and squeezed by the pressure of the uterus, into a fibrous or compact form, constitute another species of mole that more frequently occurs than any of the former. These, though they may assume the appearances of gravidity, are generally, however, expelled spontaneously, and are seldom followed with dangerous consequences. But, when two or more of the ova descend into the uterus, and attach themselves so near one another, as to adhere, in whole or in part, as to form only one body, with membranes and water in common, this body will form a confused irregular mass, which is called a *monster*; and thus a monster may be either defective in its organic parts, or be supplied with a supernumerary set of parts derived from another ovum. This proceeds from a defect or accident in nature,

nature, which it is entirely beyond the power of medicine to rectify or prevent.

It would seem, however, from a due contemplation of the foregoing facts, from the frame and structure of females, and from the ultimate end and purpose of their conformation, that almost every malady resulting from a state of pregnancy, except the last-mentioned, may be in a great measure prevented or removed. The natural temperature of women differs in a very considerable degree from that of men, inasmuch as their blood and juices are determined to a peculiar and distinct purpose; and hence it is that obstructions of the menses, their excess, or privation of the office intended them, constitute those peculiar maladies which we term *Diseases of Women*. The natural temperature of the male is *hot and dry*; that of the female, *cold and moist*. The action of the procreative tincture of man is SOLAR, i. e. of a heating and quickening faculty; that of the woman is LUNAR, i. e. of a cold and vegetative quality. As the sun heats and gives prolific energy to the fruits of the earth, so man fecundates and gives life to the prolific tincture of the woman. Thus the female, as the microcosm, or epitome of the celestial system, possesses an inherent similitude with the moon, vegetates and brings forth the fruit of her womb, and not only feels the influence and sympathy of that luminary in her monthly discharges, but in all the travail and vicissitudes of pregnancy*. To the same source likewise we trace the cause, and decide the question, whether the fruit of the uterus be male or female? for, if the male seed be predominant, heat will abound, and a male foetus will be gene-

* A proof of this observation is found by females being often out of their reckoning; for if the moon be swift in motion at the time of conception, the child will be born within nine calendar months; if slow in motion, the mother will appear to go longer than her time; but if in her mean motion, then she will go her exact period.

rated; but, if the cooling moisture of the woman overcome the masculine heat of the male seed, a female is then produced. The old and exploded notion of this cause depending on the child's falling to the right or left side of the mother, is too absurd to weigh a moment on the mind of any reasonable enquirer.

We discover likewise that the male, being constituted of the Solar temperature, is naturally subjected to those infirmities of body and mind, which result from the elements of fire and earth; while those of the female are of Lunar tendency, arising from the elements of water and air. Of these four elements our gross or material part is formed, and by their due and proper commixture in the constitution, or circulating mass, are life and health established; whilst, on the contrary, by their discordant, defective, or predominant power, disease and death are produced. Now the male abounding in heat, and the female in moisture, is the reason why many disorders incident to man are alleviated by contact with the woman; as those of the woman are by contact with the man. In the grand scale of nature, we find the meridian heat and scorching rays of the sun to be qualified and corrected by the cooling moisture and mild influence of the midnight moon; but when either of these are obstructed in their effect, by the intervention of accidental causes, by storms, by tempests, or unseasonable blasts, we then endeavour to repress by art the evil consequences that are likely to ensue. Just so in the human economy, the grand purpose and design of medicine is to correct and modify the discordant elements in the constitution, and to give that vigour and tone to the vital powers, which constitute the genuine principle of health and life.

From what has been suggested, we might safely infer, that the constitution and temperature of the female

female requires a medicine of an opposite action and tendency to that adapted to the male, and which ought to be compounded of elements congenial to the intentions of nature, calculated to purge the uterus, to purify the seminal fluid, and give stimulus to the *catamenia*; which, if not put in motion by the functions of nature, becomes dull and stagnant, and vitiates the whole circulating mass; whence those disorders, peculiarly incident to the most amiable, as being the most virtuous, of women, are confessedly derived; and for the cure and prevention of which, a peculiar and distinct remedy has long been wanting.

These, and other considerations, influenced by the known power of the second causes, and their faculty of acting upon the mechanism of the human frame, induced me to attempt the chemical preparation of two subtile Tinctures, constituted of a co-mixture of the purest elements of which our blood is composed, and adapted to the peculiar temperature and constitutions of the opposite sexes. That intended for the use of Man, I call the SOLAR TINCTURE, as being congenial to the seminal functions and vital principles of his constitution. That adapted to Woman, I call the LUNAR TINCTURE, as being calculated to act upon the menstrual and vegetative fluids, and as being compounded of those elements which make up the frame and temperature of her body. The invention of these Tinctures has been the result of a long and laborious application to the study of universal nature; of the properties of fire, air, earth, and water, in the propagation of animal and vegetable life, and in the composition of medicine; in which, though these elements form the PABULUM of the universe, yet the art of collecting, uniting, and assimilating them with the vital fluids, seems to be unknown among modern chymists, and hath escaped the observation of medical science. The
fixidity

fixidity of these Tinctures at once establishes their power and efficacy beyond all others; for they can never be affected by change of weather or climate, nor by heat or cold; nor will they suffer any diminution of strength or virtue by remaining open, or uncorked; a circumstance which cannot be affirmed of any other fluid at present known throughout the world.

I shall now proceed to shew the action of the Lunar Tincture on female constitutions; and as this medicine is only intended to remedy such complaints as particularly relate to pregnancy, and the menstrual discharge, I shall omit to notice any other maladies, until I come to treat of the Solar Tincture; which though essentially directed to give tone and vigour to the constitution of the male, is nevertheless equally efficacious to the female in removing all disorders of the blood and lymph which are alike common to valetudinarians of both sexes. No complaint in the female habit, therefore, comes under our present enquiry, till at or near the age of puberty. Until this important period of the sex arrives, the rules heretofore laid down in the Medical Part of my Family Physician, for the management and future health of young ladies, deserve a very close and serious attention. The evident distinction between the male and female in their structure and design, in their bodily strength and vigour, and in the procreative fluids, demands the utmost attention from themselves, and the tenderest care from the physician. Nor can we too often nor too earnestly caution parents and guardians against the evils of that absurd though fashionable style of bringing up young ladies, by confining them almost entirely to their apartments, keeping them on poor low diet, and using artificial means to make them spare and delicate, which contribute more to their prejudice than all the incidental diseases to which they are otherwise subject. These refinements in a female

female education, besides destroying their ruddy complexion (which is often the design of it) relaxes their solids, impoverishes their blood, weakens their minds, and disorders all the functions of their body, whereby they are often rendered incapable of conception, and denied the felicity of becoming mothers. On the contrary, it ought to be the study, as it certainly is the duty, of all that have girls under their care, to indulge them in every innocent diversion, and in every active exercise, which can give freedom to the limbs, or agility to the body; as all these have a natural tendency to exhilarate their spirits and promote digestion, to stimulate their blood and juices, and, at the proper age, to bring on a free and easy discharge of the menstrual flux.

Though it be universally admitted, that this flux is absolutely necessary to nourish and support the foetus, and that without it human generation cannot be carried on; and that it is consequently and obviously peculiar to the female uterine system; yet it is curious to observe the various absurd and contradictory opinions some physicians have laboured to establish, merely, one might suppose, to bewilder the understanding, and subject delicate females still more to that erroneous or misguided treatment, by which their health, their life, and every earthly blessing, is too frequently destroyed.

Dr. Bohn and Dr. Freind insist that this flux is nothing more than a plenitude of the common mass of blood, which nature throws off only for relief against the too abundant quantity. Dr. Freind supposes that this plenitude arises from a coacervation in the blood-vessels of a superfluity of aliment, which, he thinks, remains over and above what is expended by the ordinary ways; and that women have this plethora, and not men, because their bodies are more humid, and their vessels, especially the extremities of them, more tender, and their manner

manner of living generally more inactive than that of men; and that these things concurring are the occasion that women do not perspire sufficiently to carry off the superfluous alimentary parts, till they be accumulated in such quantities as to distend the vessels, and force their way through the capillary arteries of the uterus. It is supposed to happen to women more than to the females of other species, which have the same parts, because of the erect posture of the former, and the vagina and other canals being perpendicular to the horizon; so that the pressure of the blood is directed towards their orifices; whereas in brutes, they are parallel to the horizon, and the pressure wholly is on the sides of the vessels. The discharge, he thinks, happens in this rather than in any other, as being favoured more by the structure of the vessels; the arteries being very numerous, and the veins sinous and winding, and therefore more apt to retard the impetus of the blood; and consequently, in a plethoric case, to occasion the rupture of the extremities of the vessels, which may last, till, by a sufficient discharge, the vessels are eased of their overload. To this he adds the consideration of the soft pulposus texture of the uterus, and the vast number of veins and arteries with which it is filled. Hence a healthy maid being arrived at her growth, begins to prepare more nutriment than is required for the necessary support of the body; which as there is not to be any farther accretions, must of necessity fill the vessels, and especially those of the uterus and breasts, they being the least compressed. These will be dilated more than the others; whence, the lateral vascules evacuating their humours into the cavity of the uterus, it will be filled and extended. Hence a pain, heat, and heaviness, will be felt about the loins, pubes, &c. the vessels of the uterus, at the same time, will be so dilated as to emit blood into the cavity of the uterus,

uterus, and its mouth will be lubricated and loosened, and blood issue out. As the quantity of blood is diminished, the vessels will be less pressed, and will contract themselves closer, so as again to retain the blood, and let pass the grosser part of the serum, till at length only the usual serum passes. Again, there are more humours prepared, which are more easily lodged in vessels once dilated; and hence the menses go and return at various periods in various persons.

This hypothesis is judiciously opposed by Dr. Drake, who maintains, that there is no such plenitude, or at least that it is not necessary to menstruation; arguing, that if the menses were owing to a plethora so accumulated, the symptoms would arise gradually, and the heaviness, stiffness, and inactivity, necessary symptoms of a plethora, would be felt long before the periods were completed, and women would begin to be heavy and indisposed soon after evacuation, and the symptoms would increase daily; which is contrary to all experience. Many women, who have them regularly and easily, have no warning, nor any other rule to prevent an indecent surprise, than the measure of time; in which, some that have slipped, have been put to confusion and shifts no way consistent with the notice a plethoric body would give. He adds, that even in those who are difficultly purged this way, the symptoms, though very vexatious and tedious, do not make such regular approaches as a gradual accumulation necessarily requires. If we consider what violent symptoms come on in an hour, we shall be extremely puzzled to find the mighty accession of matter which should, in an hour or a day's time make such great alterations. According to the hypothesis, the last hour contributed no more than the first; and of consequence, the alteration should not be greater in the one than in the other, setting aside the bare eruption.

There are others who give into the doctrine of fermentation, and maintain the evacuation in those parts to be an effect of an effervescence or ebullition of the blood. This opinion has been maintained by Drs. Charleton, Bale, De Graaf, and Drake; the two first of whom suppose a ferment peculiar to the women, which produces this flux, and affects that part only, or at least principally. De Graaf, less particular in his notion, only supposes an effervescence of the blood, raised by some ferment, without assigning how it acts or what it is. The sudden turgescence of the blood occasioned them all to think that it arose from something till then extraneous to the blood, and led them to the parts principally affected to seek for an imaginary ferment, which no anatomical enquiry could ever shew, or find any receptacle for, nor any reasoning necessarily infer. Again, that heat which frequently accompanies this turgescence led them to think the case more than a plethora, and that there was some extraordinary intestine motion at that time.

Dr. Drake contends that it is not only necessary there should be a ferment, but a receptacle also for this ferment; concluding from the suddenness and violence of these symptoms, that a great quantity must be conveyed into the blood in a short time, and consequently that it must have been ready gathered in some receptacle, where, whilst it was lodged, its action was restrained. He pretends to ascertain the place both of the one and the other, making the gall-bladder to be the receptacle, and the bile the ferment. The liquor he thinks well adapted to raise a fermentation in the blood, when discharged into it in quantity; and, as it is contained in a receptacle that does not admit of a continual issue, it may be there reserved, till in a certain period of time, the bladder becoming turgid and full, through the compression of the incumbent viscera, it emits the gall; which, by the way of the lacteals, insinuating

ating itself into the blood, may raise an effervescence that occasions the aperture of the uterine arteries. To confirm this, he alleges that persons of a bilious constitution have the menses either more plentifully or more frequently than others; and that distempers manifestly bilious are attended with symptoms resembling those of women labouring under difficult menstruation. Should this argument, however, be admitted, men would have the menses as well as women. But to this he answers, that men do not abound in bile so much as women, the pores of the former not being so open, and carrying off more of the serous part of the blood, which is the vehicle of all other humours, and consequently a greater part of each is discharged through them than in women, wherein the superfluity must either continue to circulate with the blood, or be gathered into proper receptacles, which is the case in the bile. The same reason he gives why menstruation should not be in brutes: the pores of these being manifestly more open than those of women, as appears from the quantity of hair, for the vegetation of which, a larger cavity, and a wider aperture of the glans, are necessary, than where no such thing is produced: there is yet some difference between the males and females even among these, some of the latter having their menses, such as the oran-outang, &c. though not so often, nor in the same form and quantity, as women. But without dwelling on these abstract reasonings, the absurdity of which will be obvious to every person who turns to the foregoing system of human impregnation, we need only remark, that there are two critical periods in every woman's life which completely destroys this hypothesis. These are, that at the age of fourteen or fifteen the menses begin to flow; but subside at the age of forty or fifty. At their commencement, we often find the difficulty, and consequent disease, arises from their *deficiency*;

whereas, according to the foregoing doctrine, they would then *always* flow with the greatest freedom. At the period when they should cease, they are apt to come in such abundance as to bring on a flooding, which not only endangers, but too frequently destroys, life; a fatal consequence, that could not possibly happen, were the above arguments true.

OF FEMININE OR LUNAR DISEASES.

THAT the vegetative or procreative faculties of women are universally governed by the lunations of the moon, their own experience, as well as the demonstrations given in my Treatise on the Occult Sciences, indisputably prove. The first show of the catamenia, if it be natural, invariably comes with the new, full, first and last quarters of the moon; and this effort of nature is justly considered as the sure sign of a procreating ability, and of complete puberty*. Whenever this season arrives, whether early or late, the constitution of every female undergoes a considerable change, and the greatest care and attention are then necessary, since the future health and happiness of every wo-

* Some females have their catamenia in the full moon, some in the new moon, and some in the wane. This is owing to their several complexions; and although all females, in respect to the male, are phlegmatic, yet some are more sanguine, some more choleric, and some more melancholy, than others. The sanguine, or those females who have the aerial property most predominant in their complexion (when in health) have their monthly discharges at the first quarter of the moon; those who have the fiery property most predominant in their composition, and are choleric, have their menses at the full moon; those of a melancholy temperature, who partake more of the earthly quality, have their monthly courses when the moon arrives at her third quarter; but the phlegmatic, whose complexion participates more of the aqueous property, have such periods of discharge at the new moon. Hence we may conclude, that were females to observe the situation of the moon to the sun, at the first time they have a show of the catamenia, they would be enabled, by a proper regimen, to keep themselves in perfect health, and their temperature in a proper equilibrium.

man depend in a great measure, upon her conduct at this period. It is the duty of mothers, and of those who are entrusted with the education of girls, to instruct them early in the conduct and management of themselves at this critical moment. False modesty, inattention, and ignorance of what is beneficial or hurtful at this time, are the sources of many diseases and misfortunes, which a very little attention might now prevent. Nor is care less necessary in the subsequent returns of this discharge. Taking improper food, violent agitations of the mind, or catching cold, is often sufficient to ruin the health, or to render the female for ever after incapable of procreation.

In order to escape the chlorosis, and other similar diseases incident to young women at the period when the menses commence, let them avoid indolence and inactivity, and accustom themselves to exercise in the open air, as much as possible. The discharge in the beginning is seldom so instantaneous as to surprize them unawares. The eruption is generally preceded by symptoms that indicate its approach; such as a sense of heat, weight, and dull pain in the loins; distension and hardness of the breasts, head-ache, loss of appetite, lassitude, paleness of the countenance, and sometimes a slight degree of fever. When these symptoms occur, every thing should be carefully avoided which may obstruct the discharge, and all gentle means used to promote it: as sitting frequently over steams of warm water, drinking warm diluting liquors, &c. When the menses have begun to flow, great care should be taken to avoid every thing that tends to obstruct them; such as salt-fish, and all kinds of food that are hard of digestion, and cold acid liquors. Damps are likewise hurtful at this period; as also anger, fear, grief, and other affections of the mind. From whatever cause this flux is obstructed, except in the state of pregnancy,

proper

proper means should be instantly used to restore it; and if exercise in a dry, open, and rather cool air, wholesome diet, generous liquors, in a weak and languid state of the body, cheerful company and amusement, fail, recourse must be had to medicine. In all such cases, blood-letting must be carefully avoided; but let the patient take from twenty to thirty drops of the Lunar Tincture, in a wine-glass of warm water or mugwort-tea, every morning before breakfast, every day at noon, and every night before going to bed, until the intention be answered, which will usually take place in three or four days; without the assistance of any other medicine whatever. But it sometimes happens, in relaxed constitutions, that the menstrual discharge, on its first appearance, is vitiated, and superabundant; the consequence of this is, that the patient becomes weak, the colour pale, the appetite impaired, and the digestion languid, so that dropsy or consumption is likely to ensue. Effectually to prevent these, let the patient be kept two or three days in bed, with her head low; let her observe a slender diet, principally of white meats; her drink being red-port negus. Every night and morning, for ten or twelve days, let her take one table-spoonful of the Solar Tincture, diluted in double the quantity of decoction of nettle-roots, or of the greater comfrey; and after the flux has abated, and her health and strength seem to return, let her only take a table-spoonful of the Solar Tincture, every day at noon, in a glass of cold spring-water; which wonderfully contributes to restore a due consistency to the circulating mass, promotes digestion, and invigorates the spirits. Before the customary period returns, she must discontinue the Solar Tincture; and, if there be the least appearance of irregularity or obstruction, let her again take, night and morning, for two or three days, from twenty to thirty drops of the LUNAR TINCTURE, in a glass of mugwort-

wort-tea, and she will quickly find a regular habit, and her health amazingly established. In obstinate or neglected cases, where the menses have seceded, and after an irregular appearance, have turned wholly into the habit, both these Tinctures should be used with a less sparing hand, particularly under circumstances in any respect similar to the following remarkable

C A S E.

Being called to the assistance of a young lady, of fifteen years of age, I was informed her menses had made an irregular appearance about five or six times, coming first with the full and then with the new moon, and afterwards at the distance of two or three months apart, until they totally disappeared, and turned back upon the habit. No notice was taken, until the patient was seized with a violent bleeding at the nose, attended with fever and epileptic fits. After being under the care of an eminent physician for several months, who directed venesection, and almost every customary application, to no kind of purpose, the disorder fixed in her neck, forming a large tumour, the acrimony of which fell upon her lungs, and threw her into strong convulsions.

In this extremity I was sent for. Perceiving the whole system deranged by spasmodic affections, and a locked jaw almost finally completed, my first object was to relieve the vital organs, by giving force and elasticity to the circulating mass. With this view I with difficulty forced the mouth sufficiently open to administer one table-spoonful of the Solar Tincture *undiluted*; and within half an hour, to the astonishment of her friends, I had the pleasure of seeing every convulsive symptom die away, and of hearing the patient's voice, of which she had been totally deprived for upwards of a week before. Two hours after, another spoonful of the Solar
Tincture

Tincture was taken, with additional success; and the patient afterwards continued this medicine, in the quantity of a table-spoonful, in a wine-glass of warm water, three times a day, for six days, at the expiration of which time her appetite and strength were surprisingly returned; and she was then put under a regular course of the Lunar Tincture. Twenty drops, in a wine-glass of mugwort-tea, were taken every night and morning, for thirteen successive days; and on the morning following, it being the full moon, with which her menses originally came, she had the consolation to find that every obstruction was removed, and that the due course of nature was completely re-established. The glandular swellings gradually subsided, her natural complexion quickly returned, and she now continues in blooming health, perfectly regular, free from all obstruction, as well as from every consequent complaint, thankful for the blessings of her recovery, and desirous of communicating the means to any unfortunate female under similar affliction. Reference concerning this case may be had by application to the author.

CHLOROSIS, OR THE GREEN SICKNESS, BY SOME
CALLED THE LOVE-FEVER.

This disease usually attacks virgins a little after the time of puberty, and first shews itself by symptoms of *dyspepsia*, or bad digestion. But a distinguishing symptom is, that the appetite is entirely vitiated, and the patient will eat lime, chalk, ashes, salt, &c. very greedily; while at the same time there is not only a total inaptitude to proper food, but it will even excite nausea and vomiting. In the beginning of the disease, the urine is pale, and afterwards turbid; the face becomes pale, and then assumes a greenish colour; sometimes it becomes livid or yellow; the eyes are sunk, and have a livid circle round them; the lips lose their fine red colour;

colour; the pulse is quick, weak, and low, though the heat is little short of a fever, but the veins are scarcely filled; the feet are frequently cold, swelling at night, and the whole body seems covered with a soft tumefaction; the breathing is difficult; nor is the mind free from agitation as well as the body; it becomes irritated by the slightest causes; and sometimes the patient loves solitude, and becomes sad and melancholy. There is a retention of the menses throughout the whole course of the disorder, which eventually fixes on the vital organs, and death ensues.

The above complaint indisputably arises from stifling or suppressing the calls of nature at this vernal season, or juvenile spring of life, when the primary command of God, "*increase and multiply*," is most sensibly impressed upon the whole human fabric. Every tube and vessel appertaining to the genital system, being now filled with a procreative liquor, excites in the female a powerful, yet perhaps involuntary, irritation of the parts, strongly soliciting the means to discharge their load by venereal embraces. These from prudential motives being often necessarily denied, the prolific tinctures seize upon the stomach and viscera, obstruct and vitiate the catamenia, choke and clog the perspirative vessels, whereby the venal, arterial, and nervous fluids become stagnant; and a leucophlegmatia, or white flabby dropfical tumour, pervades the whole body, and quickly devotes the unhappy patient to the arms of death. In this manner, I am sorry to remark, are thousands of the most delicate and lovely women plunged into eternity, in the very blossom of life, when female excellence is but budding forth, big with the promised fruit of rapture and delight! How much then does it become the duty of parents and guardians, who have daughters or wards in situations like these, and where no very gross objection can arise, to suf-

fer them to marry with the men they love; or otherwise to provide suitable matches for them; since this will effect the most rational and most natural cure, by removing the causes of the complaint all together. If, however, matrimony be not then convenient nor likely in a short time to take place, recourse must forthwith be had to proper regimen, and physical aid, otherwise delirium or consumption will quickly ensue. The best method of regimen is laid down in my Family Physician, page 217, which, if well observed, in addition to the following course, will generally perform a cure. Take, leaves of mugwort, briony, and pennyroyal, of each a handful; infuse them four days in two quarts of soft water, and then pour off the clear liquor for use. Take a gill-glass three-parts full, with forty drops of the *Lunar Tincture* added to it, three times a day, viz. morning, noon, and night, till the decoction be all used. Then reduce the dose to thirty drops of the Tincture, in a wine-glass of cold spring-water, morning and evening, for fifteen days; after which it should be taken only once a day, or every other day, until the patient finds herself entirely free from every symptom of the disease. For this malady, it is the only specific hitherto known; it unclogs the genital tubes, purges and cools the uterus and vagina, promotes the menstrual discharge, cleanses the urinary passages, dissolves viscid humours in the blood, sharpens the appetite, stimulates the nerves, and invigorates the spirits, which in all stages of *chlorosis* are so apt to be depressed. When the disorder is not very obstinate, nor far advanced, let the patient take from thirty to forty drops of the Lunar Tincture, in a wine-glass of cold spring-water, for thirty or forty days successively, and it will perform a cure without the trouble of preparing the decoction. In this malady, I have lately had the happiness of completing an elegant cure, which I shall mention here,

here, merely for the information of such unfortunate maids as may be languishing under the same deplorable circumstances. The following is a literal statement of the

C A S E.

A young lady, turned of seventeen, had been afflicted with *chlorosis* almost three years. In the early part of the malady, she conceived an unconquerable appetite for wood-cinders, concremented mortar, tobacco-pipes, sealing-wax, &c. Her courses appeared at different intervals of the disease, but always irregular, and more or less in a vitiated state. About half a year preceding my attendance, this flux had totally ceased; but upon the approach of every new moon, with which her menses originally came, she was afflicted with pains in the back and loins, heaviness and turgidity about the region of the uterus, and other customary symptoms of the catamenia; yet not the smallest show could be brought to appear. A little before this, the lady's affections had been placed on a young man in the neighbourhood; but whose situation in life was by no means on a scale adapted to the views of her father and family. The moment therefore this attachment was discovered, the lady was confined to her apartment, and neither suffered to take exercise or fresh air, without some trusty attendant to accompany her. This confinement heightened her disease, and brought on a settled melancholy, a green fallow complexion, dejected spirits, universal lassitude, and wasting of the flesh. The morbid state of her body having thus undermined her constitution, without attracting either her own or her father's care, the disorder fell upon the vital organs, and with so rapid a progress, that within twenty-four hours she was seized with an ardent fever, attended with loss of appetite, delirium, and a total

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privation of speech. In this shocking state she had the alternate advice of three physicians, of the first respectability; but the disorder increasing, and putting on the most dangerous symptoms, after having baffled their utmost skill, a consultation was had, and the miserable patient was apparently consigned to the grave.

Under these deplorable circumstances it was my lot to be called; and, upon a close examination of the patient, scarcely any visible signs of life remained. The pulse had nearly subsided. The action of the heart and lungs could scarcely be discerned. The eyes were sunk, and fixed; yet retained an uncommon look of expression and sentiment. At this time she had a large blister round her neck; another on the pit of her stomach; a third, very large, between her shoulders; a fourth, on her head; and a fifth and sixth, inside the ancles and legs. Venesection had been so often repeated, that scarcely blood enough remained to support the heat and action of the heart. In this exhausted state, I only administered three table-spoonfuls of the Solar Tincture, *undiluted*, at intervals of little more than an hour apart; and in the space of four hours after, I had the heart-felt satisfaction of seeing the energy of the blood restored; pulsation gradually resumed its action; the lungs were dilated; respiration became free; and a profuse sweat, which the Tincture induced, fortunately opened the perspiratory vessels; and the patient began to give evident signs of ease and sensibility. Warm nourishing food was afterwards taken in small quantities; and I was enabled to remove the blisters, and perform the dressings, without pain or torture to the languid patient. The Solar Tincture was now daily administered for ten days, in the quantity of a table-spoonful, in a wine-glass of warm barley-water, three times a day, and once in the night, whenever watchfulness came on. About the middle of the seventh

seventh day, she began to articulate; and on the tenth day, her voice and bodily functions were so far restored, that I deemed it safe to give her an interval of six days rest, without any medicine whatever. I had the happiness to find my expectations completely answered; for nature, assisted by nourishing food, effected more than a profusion of drugs; so that, in little more than twenty days, my patient was able to walk, and to put herself under a course of the Lunar Tincture. This she persisted in, with nourishing diet, seconded by occasional but very gentle airings in the carriage, for near a month longer; when, on the approach of the ensuing new moon, to the unspeakable joy of her friends, the menstrual flux resumed its natural course; the comfort and relief of which was so visible to the patient, that she in extacy exclaimed, "*my sufferings are at an end.*" This lady has ever since continued to improve in health and spirits in so surprising a degree, that looking back on her late miserable and reduced state of body, forms a contrast so great as almost to exceed belief. Yet the lady and her worthy parent are at all times ready to authenticate the fact to any reputable enquirer, or to the friends of any unfortunate female labouring under a similar affliction.

OF THE FLUOR ALBUS, OR WHITES.

THE fluor albus, female weakness, or whites, as it is commonly called, is a disease of the uterus and its contiguous parts; from which a pale-coloured, greenish, or yellow fluid is discharged, attended with the loss of strength, pain in the loins, bad digestion, and a wan sickly aspect. The quantity, colour, and consistence, of the discharge, chiefly depend upon the time of its duration, the patient's habit of body, and the nature of the cause by which it was produced. Weakly women, of lax solids, who have had many children, and long laboured
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under ill health, are, of all, the most subject to this disagreeable disease; from which they unfortunately suffer more severity than others, as the nicest sensations are often connected with such a delicacy of bodily frame as subjects them to it. In Holland it is very frequent, and in a manner peculiar to the place, from dampness of situation; the surrounding air being so overcharged with moisture as to relax the body, prevent perspiration, and throw it upon the bowels or uterus; producing in the first a diarrhœa or flux, in the last the fluor albus or female weakness. The discharge often proceeds from the vessels subservient to menstruation; because, in delicate habits, where those vessels are weak, and consequently remain too long uncontracted, the fluor albus sometimes immediately follows the menses, and goes off by degrees as they gradually close. It also comes from the mucous glands of the uterus, as is particularly evident in very young females, of eight or ten years old; in these, though very rarely, it has been observed; it must then necessarily have escaped from those parts, as the uterine vessels are not sufficiently enlarged for its passage at so early a period.

Sometimes, as in women with child, it proceeds from the passage to the uterus, and not from the uterus itself; which during pregnancy is closely sealed up, so that nothing can pass thence till the time of labour. The application of those instruments called pessaries, from the pain and irritation they occasion, are also apt to bring on this discharge. The fluor albus has been supposed to supply the want of the menses; because where the first prevails, the last are generally either irregular or totally wanting: but it might more properly be said that the presence of the fluor albus, which is a preternatural evacuation, occasions the absence of that which is natural; as is evident from the return of the menses after the fluor albus has been cured.

Indeed

Indeed, when this discharge appears about the age of thirteen or fourteen, and returns once a month, with symptoms like those of the menses, then it may be deemed strictly natural, and ought not to be stopped. The distinctions of the fluor albus may be divided into two classes: the first arising from a simple weakness of the seminal vessels; the second from a relaxation of the solids, which may either be general, where the whole bodily system is enervated and unstrung; or partial, where the womb only is affected, in consequence of hard labour, frequent miscarriages, a suppression or immoderate quantity of the menses, or a strain of the back and loins. In the first case, the discharge being generally mild, may be easily taken away. In the second, it may proceed from a vitiated or impure blood, where the body, from this cause, is loaded with gross humours, which nature, for her own security and relief, thus endeavours to carry off. In such cases, the discharge is often of a reddish colour, like that from old malignant ulcers, being sometimes so sharp as to excoriate the contiguous parts, and occasion a smarting and heat of urine. A deep-seated darting pain, with a depression, attending such a discharge, is a very dangerous and alarming sign, and indicates an ulcerated or cancerous womb. This malignant state of the disease, if of long continuance, is extremely difficult of cure; and disposes the patient to barrenness, a bearing down, dropsy, or consumption. In short, as this is a malady of the most dangerous kind, which by long continuance or neglect becomes difficult of cure, and often proves fatal, it were to be wished that women, on such occasions, would be more attentive to their own safety, by using all possible means in due time to prevent the disorder.

As women are sometimes connected with those who do not conscientiously regard their safety, it is
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a circumstance of the utmost consequence to distinguish a fresh venereal infection from the fluor albus, or whites: for, if the first be mistaken for the last, and be either neglected or improperly treated, the worst consequences may arise. In addition therefore to what I have stated in page 219 of my Family Physician, the following signs will serve to inform the patient whether there be occasion for her doubts or not. A fresh infection, called gonorrhœa, is malignant and inflammatory; the fluor albus most commonly arises from relaxation and bodily weakness, and therefore the remedies proper in this last disorder would render the first more violent, by locking up and confining the infectious matter. In the gonorrhœa, the discharge chiefly proceeds from the parts contiguous to the urinary passage, and continues whilst the menses flow; but in the fluor albus, it is supplied from the cavity of the womb and its passage, and then the menses are seldom regular. In the gonorrhœa, an itching inflammation and heat of urine are the forerunners of the discharge; the orifice of the urinary passage is prominent, and the patient is affected with a frequent irritation to make water. In the fluor albus, pains in the loins, and loss of strength, attend the discharge; and if any inflammation or heat of urine follow, they happen in a less degree, and only after a long continuance of the discharge, which becoming sharp and acrimonious, excoriates the surrounding parts. In the gonorrhœa, the discharge suddenly appears, without any evident cause; but in the fluor albus, it comes on more slowly, and is often produced by irregularities of the menses, frequent abortion, strains, or long-continued illness. In the gonorrhœa, the discharge is greenish or yellow, less in quantity, and not attended with the same symptoms of weakness. In the fluor albus, it is also often of the same colour, especially in bad habits of body,
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and after long continuance; but is usually more offensive, and redundant in quantity. The whites often afflicts maids of a weakly constitution, as well as married women and widows; and indeed there are few of the sex, especially such as are sickly, who have not known it, more or less. For whatever disease renders the blood poor, foul, or viscid, and reduces a woman to a languid condition, is commonly succeeded by the whites, which when they come in this manner, continue more abundantly to weaken the body, and are in great danger, without speedy remedy, of wearing away the patient, and making her a miserable victim to mortality. Let no woman, therefore, when she finds herself afflicted by this noxious complaint, neglect endeavouring to obtain an immediate remedy. The regimen and general management are pointed out in the medical part of my Family Physician, page 220; but, in lieu of all other medicines, make a decoction of tormentil-root, bistort, comfrey, and red rose-leaves, and take a gill-glass three parts full, adding to it thirty or forty drops of the Lunar Tincture, which must be persisted in, morning, noon, and night, for ten days; repeat the decoction, morning and evening only, for ten days more; after which let it be discontinued, and take the Tincture every morning, for a month, twenty drops in a wine-glass of cold spring-water; the disease will be found gradually to abate: and, upon any symptoms of a return of it, take from fifteen to twenty drops of the Tincture, in a wine-glass of cold water, every morning, for a week, and it will go entirely off; as hath been verified in a great number of patients, who are ready to testify that they owe their cure, even in the most obstinate cases, entirely to the Lunar Tincture.

OF BARRENNESS, OR INFERTILITY.

BARRENNESS is such a state of a woman's body as indisposes it, upon the use of the natural means,

to conceive and propagate her species. This proceeds from many sources, which may be reduced to these two general heads: First, an indisposition of the parts to receive the male semen in the act of copulation, or that vital effluvium streaming from it, which alone can impregnate the ovaria. Secondly, an inaptitude in the blood to retain and nourish the vital principle after it is communicated, so as to make it grow and expand its parts, till it become a proper fœtus. Conception is also hindered by a hectic, hydropic, or feverish, sickly habit; by a deficiency or obstruction of the monthly courses, which impoverishes the fluids; by the whites, which, continuing too long, relaxes the glands of the uterus, and drowns, as it were, the prolific particles; and too often by a *vice*, which utterly destroys the tone and vigour of the parts; as is fully exemplified in my Family Physician, page 221. Preparatory to the cure of infertility, it is proper to use evacuations, unless any particular symptom shews them to be dangerous. Bleeding, lenient purgatives, such as the solutive electuary, and a gentle vomit of ipecacuanha, especially if the person be plethoric or cacochymic, cannot but be of great service; proceed then with the following strengthening electuary; take roots of satyrion, and eringo candied, of each one ounce; powders of cinnamon, sweet-fennel-seeds, and preserved ginger, of each half an ounce; mace, roots of contrayerva, and Spanish angelica, of each one drachm; troches of vipers one ounce; juice of kermes, six drachms; tincture of cantharides, half a drachm; syrup of cloves, a sufficient quantity to make an electuary. Let the quantity of a large nutmeg be taken every morning early, every afternoon at about five o'clock, and at night going to bed; and, immediately after taking the electuary, drink a wine-glass full of the following infusion, adding to it from twenty to thirty drops of the Lunar Tincture, viz. Take cinnamon powdered one ounce; sweet-

sweet-fennel-seeds bruised, and lavender-flowers, of each half an ounce; Spanish angelica-root, ginger, contrayerva, mace, and cochineal, of each one drachm and a half; Canary wine, two quarts: infuse, according to art, for two or three days, and strain off the infusion for use. Continue the electary for ten days successively; then omit a week, and continue it for ten days more; after which continue the infusion and Tincture only, three times a day, for ten days more; then take it only twice a day for a month, or as long as the case requires, adding from fifteen to thirty drops of the Tincture to each glass, as the age or constitution of the patient may require. This course will be found most excellent for barrenness and debility; particularly whilst ably assisted by the Solar Tincture; which will greatly warm and rectify the blood and juices, increase the animal spirits, invigorate and revive the whole human machine, and not only raise the appetite to venereal embraces, but remove the usual impediments to fertility; prepare the womb for performing its office, and the ovaria for impregnation. The Tincture warms, comforts, and excites the generative parts to admiration, and seldom fails of curing all common occasions in barrenness, in a month or six weeks, if duly followed; as a proof of which, I beg leave to add the pleasing circumstances of the following singular

C A S E.

A young lady of rank and fortune, but of a delicate frame, entered into the marriage state about four years ago. Instead of deriving from it that blissful gratification which gives the honoured name of mother, she became weak, languid, pale, and melancholy. The whole nervous system was relaxed, the natural functions of the body were suspended, œdematous tumours obstructed the san-

guiferous passages, whence incurable barrenness, and lingering consumption, seemed to be the sad prospects in view. In this melancholy state of body and mind, by advice of her physician, when all hopes were apparently at an end, she was put under a regular course of the Solar Tincture, which, to the astonishment of all, gradually deturged the obstructed vessels, propelled the animal juices through the system, strengthened and braced the nerves, induced a regular habit, restored the sparkling eye and blooming cheek, and gave new vigour to the animal functions; the result of which has been, that before the end of the ensuing year, after her health was thus recovered, the lady became the happy mother of a SON and HEIR, to the inexpressible joy of an affectionate husband, and a sympathising family! For the sake of females labouring under a similar disease, reference to the above pleasing fact is permitted to be had by all respectable enquirers, at the Author's house, No. 40, New Bridge-street, near St. Paul's.

INDISPOSITIONS ATTENDANT ON PREGNANCY.

THOUGH pregnancy be not a disease, but rather a natural alteration of the animal economy, which every female form must undergo, yet it is attended with a variety of complaints that require great attention; but for their cure or alleviation, medical aid has hitherto proved very deficient. In these complaints, however, the Lunar Tincture exerts most extraordinary properties, and excels whatever has been offered under a medical form. It is an universal purifier of those heterogeneous particles which produce nausea, and arise from the combining efforts of the masculine and feminine tinctures; whence, according to the grossness of the procreative fluids at the time of conception, proceed vomiting, pains in the head and stomach, fainting, &c. occasioned by the jarring elements, arising from the disproportion

disproportion in the heat and active principle of the constituent parts of the male and female seed ; this is not only attended with great debility and depression to the mother, in her whole nervous system, but often with hereditary diseases, and dreadful consequences, to the infant offspring. Indeed, so great has been the conflict of the male and female procreative tinctures for the mastery or predominant power, while passing through the circulating mass or habit of the mother, that the most curious and astonishing phenomena have, on many occasions, been observed to result from it. In a small village, in Somersetshire, in the year 1759, a girl was born with the hair on her head of two remarkably distinct colours ; the right side, from an exact parallel line which divided the skull into two equal parts, was almost black ; but the left side, from the same line, was of a reddish yellow. As she grew up, the dark hair became of a jet black, exactly like that of her father ; whilst the other became of a strong carotty red, precisely resembling that of her mother ; and after the age of puberty, the hair on the privities, and under the arm-pits, as well as on her arms and legs, was diversified in the same manner ; that on the right side, all the way down, from head to foot, being black, whilst that on the left side was entirely red. The young woman lived to the twenty-eighth year of her age, and was resorted to as a great curiosity.

Another well-known yet remarkable instance of this conflict of the male and female procreative tinctures at the time of impregnation, was the case of a man who, a few years since, kept a public-house in Tooley-street, Southwark. His father was a white man, belonging to one of the West-India packets ; and his mother was a negro-girl, whom he had taken a fancy to, and purchased, on the arrival of one of the Guinea slave-ships at the island of Jamaica. He brought her with him to London,

London, and, in the course of the ensuing year she was delivered of a son, the whole right side of which was white, like the father; but the whole of the left side was black, like the mother. As he grew up, this visible distinction became more strongly marked; and during the time he kept the above public-house, in Tooley-street, he was resorted to by an immense concourse of people, who flocked there to spend their mite, in order to be satisfied that so great a curiosity really existed. The whole of his body appeared to be intersected by an exact parallel line, by which the efforts of conception seem to have united the male and female tinctures in precise equilibrio, without suffering them to intermix in coagula, or in impregnating and expelling the ovum from the ovaria, to its suspended state in the uterus. Hence the hair on the right side was long and brown, like that of the father; and half the face, neck, body, and privities, with the arm, thigh, leg, and foot, on the right side, were white; while the corresponding parts on the left side were black, like that of the mother, with half the hair on the privities and head black and woolly, exactly like that of a true negro.

A still more curious and striking example of this astonishing effort in the male and female procreative fluids, is verified in the case of Mr. John Clark, of Prescot-street, Goodman's-fields. His father was a native of Africa, who, by dint of good fortune, had amassed a considerable sum of money, and settled in London. He married a remarkably healthy young woman, a native of Devonshire, who had been some time his servant. By her he had two sons and three daughters, who were mulattoes, except the eldest son, who was the first-born, and the person above alluded to. From the head to the navel, all round his body, he was remarkably fair, had a fine skin, handsome round features, light brown hair, and sanguine complexion,

plexion, like his mother; but from his navel downwards he was completely black, with short black woolly hair on the privities, exactly like the father. At the age of thirty he married a young lady of good family and fortune, but of a delicate disposition. For near three months he had the address to conceal this deformity of colour from the knowledge of his wife, by wearing flesh coloured silk drawers and stockings, which he pretended were lined with flannel to keep off the rheumatism, with which he had been sorely afflicted, even to a degree that endangered his life, every time he attempted to leave them off. It happened, however, from some neglect of concealment before going to sleep, that the curiosity of his wife was strongly excited; and the opportunity proving favourable in other respects, it being quite day-light in the morning, and her husband fast asleep, she eagerly proceeded to satisfy her doubts. Gently turning down the bed-clothes, and removing the other impediments in the way of a complete inspection, she no sooner discovered the real state of things, than she shrieked out vehemently, and fainted away! The husband thus suddenly awakened, beheld his wife in a fit, and saw, with sorrow and regret, the consequences of a discovery which entirely resulted from his own neglect. He immediately arose, called up the servants, and procured medical assistance with all convenient speed; but in vain---the sudden surprise, added to the mortification and terror, had so powerful an effect that the lady died in convulsions, nearly two months gone with child. I have often lamented that fortune did not throw me in the way at this critical juncture, for two reasons: in the first place, I have the vanity to think I could have saved the patient's life; but, had I failed in that, I would have persuaded Mr. Clark, from motives of philosophical speculation, and the improvement of
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medical science, to have suffered me to open the womb of this unfortunate lady, in order to extract the foetus; which, under the circumstances of the uncommon conformation of the father, might have enabled me to throw a light on this very curious subject of occult enquiry, perhaps so as to have accounted more obviously for the jarring conflicts and struggling efforts of the masculine and feminine tinctures; to which alone we are to look for the formation of hermaphrodites, the production of monsters, &c*.

Sympathy and antipathy most certainly operate very powerfully on females in the early state of pregnancy, and might, as was then suggested, have had a principal share in carrying off the above unhappy lady, while no means were used to counteract their influence on the mass of blood. Sudden

* We find many similar accounts, in different authors, of party-coloured people. Thus we are told, by Buffon and others, that copulation with a black man and a white woman has often produced a pied or spotted race, living instances of which are to be found in both the Indies. A very remarkable case is that of Maria Herig, who was spotted all over the body, and covered with hair, like the leopard. She was born at Dackstull, in Lorraine, in 1770, and was exhibited in Paris, in 1774. Both the skin and the hair were of a tan-colour; and besides these hairy spots, her stomach and belly were covered with longish hair, of a brown colour on one side, and lighter on the other. Somewhat similar, and not less remarkable, was the porcupine-man, who was born in Suffolk, in 1710, and was exhibited in every principal town in England. The skin of his body was covered with excrescences like thorns or prickles; and about the thickness of packthread. His face, the palms of his hands, and the soles of his feet, were the only parts that were free from them. They were of a reddish brown, and had such a degree of hardness and elasticity, as to rattle when the hand was moved over the body. They were half an inch long in some parts, and shorter in others. They did not appear till two months after his birth; but, what is most extraordinary, they dropped off every winter, and were renewed in the spring. He had six children, all of whom, like their father, were covered with these excrescences.

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frights, longing, and loathing, and all marks on the foetus, are obviously derived from this cause, and can only be corrected by giving energy and stimulus to the circulating system, whereby the functions both of mind and body are strengthened, and the nervous fluid fortified and protected against the sudden impresson of external objects. It seems to be admitted by many eminent practitioners, that the diseases incident to a pregnant state in the early months arise from sympathy ; whilst those peculiar to the more advanced stages of gestation, are produced by the stretching and pressure of the uterus on the contiguous viscera. Thus heart-burn and diarrhœa, tension and pains of the breast, nausea and head-ache, desire of unnatural food, tremours and dejected spirits, fainting and hysteric fits, premature menstruation, and consequent abortion, proceed from the first of these causes ; while costiveness, strangury, cramp, and cholic, appear to result from the other. And though the celebrated Dr. Stahl, Dr. Cullen, and others, have so much differed as to the theory of these diseases, yet they all agree that gentle opiates, aromatic infusions, strengthening bitters, and medicines calculated to give energy to the languid state of the circulation, and to purify the gross and viscid elements which oppress the stomach and viscera, are the only proper remedies to be administered. Now the Lunar Tincture possesses the aromatic and astringent virtues in an admirable degree ; and is elegantly adapted to invigorate and assist the active faculties of nature, in expelling all viscid humours from the stomach and bowels ; and being compounded of the most subtile and occult elements, which preserve the vital principle, it hence produces the most salutary effects on all women in a state of pregnancy, by stimulating the procreative faculty to the formation of the finest children ; correcting and purifying the procreative fluid from

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infection

infection or disease; preventing moles or false conceptions, removing all loathings, longings, or vomiting, and effectually preventing abortion, arising from whatever cause. For these reasons, whenever a woman enters into a state of matrimony, she would do well to take twenty drops of the Lunar Tincture, every other morning, to promote conception; she should then continue it three times a week, from conception to the end of the fourth month; then it may be omitted, till a fortnight before her time, when she should take twenty drops in a wine-glass of cold spring-water, every morning till her labour; at which time it will wonderfully strengthen her, and assist nature to facilitate the birth, promote the lochia, and carry off the after-pains. She might take it occasionally during the month, in any symptoms of cold, fever, or hysterics, diluted in a wine-glass of warm barley-water, about the middle of the day.

Women who are subject to miscarriages, should never fail to take this medicine, from the time they have reason to believe they are pregnant, until a full month after they have quickened. It may be taken once, twice, or thrice a day, or every other day, as the urgency of the case may require, from twenty to thirty drops, in a glass of forge-water, or in soft spring-water, in which common oak-bark has been steeped, and she will effectually get over all causes of abortion. Women, after sudden miscarriages, or bad labours, will find wonderful relief by taking twenty drops of it in a wine-glass of warm barley-water, for a week or ten days. Nurses, also, whose milk is griping or defective, should take it once or twice a day, or as often as occasion may require. The intention will quickly be experienced: the milk will be purified and augmented, and all the fluid secretions promoted, in a manner productive of sound health, both to the mother and child. In cases where œdematous swelling

swelling of the legs and labia are occasioned by the interruption of the reflux blood from the pressure of the distended uterus on the vena cava, in violent floodings, in nervous spasms, in epileptic fits, and in obstinate convulsions, where the *vis vitæ* must be supported by replenishing the vessels with the utmost speed, recourse should be had to the Solar Tincture, which, in the most dangerous cases, has been found to give immediate relief; and, if duly persisted in, will scarcely ever fail to effect a cure.

STATE OF WOMEN AT THE TURN OF LIFE.

THE most critical and dangerous time of a woman's life is that wherein the menses cease to flow, which usually happens between forty and fifty years of age. The great change which this produces, by so copious a train being turned into the habit without previous preparation, is the sole cause of its danger. Every woman must be more or less sensible when this period arrives, and should conduct herself accordingly; for when the menses are about to go off, they appear for the most part irregularly, both in time and quantity, once in a fortnight, three, five, or six weeks; sometimes very sparingly, and at other times in immoderate quantities. For want only of necessary care and attention, during the time that the menses thus give symptoms of their departure, many and various are the complaints that ensue; among which are cold chills, succeeded by violent flushings of the face, and heat of the extremities; restless nights, troublesome dreams, and unequal spirits; inflammation of the bowels; spasmodic affections; stiffness in the limbs, swelled ankles, sore legs with pains and inflammation; the piles, and other symptoms of plenitude. But all this might easily be prevented, by attending to a due regimen, and taking these Tinctures, as occasion may require.

Whenever a woman has reason to suspect her menses are about to leave her, let her lose four, five, or six ounces of blood, as her habit of body will admit; then let her make a decoction, by taking gentian-roots, one pound; senna, and orange-peels, of each half a pound; pour upon them a gallon of hot water, and after it has stood twenty-four hours, pour off the liquor for use. Let her take from twenty to forty drops of the Lunar Tincture, in a gill-glass-full of the above decoction, every night and morning for ten days; then let her continue it every morning for ten days more, and afterwards once every two or three days, or oftener, if the terms are of an ill colour and scent, until they are corrected. This course must be followed every spring and fall, for a month or six weeks successively, by all women who find their menses come irregularly, or too sparingly, until they entirely cease; after which, let the patient put herself under a course of the Solar Tincture, for a month or six weeks, taking one spoonful in a wine-glass of warm water, every night and morning for a week; then let it be taken only once a day, in cold water, for the residue of the time; and if she take, occasionally, two table-spoonfuls of the Solar Tincture, diluted in a tumbler of warm water, as a beverage after dinner or supper, instead of wine or brandy-and-water, it will be productive of great benefit in establishing a healthful state of her blood, and carrying off the viscid humours generally produced by the menstrual flux returning into the habit.

Should it at this time happen, which it often does, that the terms flow too abundantly, and produce a flooding, the patient must immediately lose six or eight ounces of blood, and be kept as much as possible at rest, with her head low, until the medicine has had time to take effect; let her diet be spare, but not too lax; and let her apply to the following

following course: Take conserve of red-roses, marmalade of quinces, juice of kermes, candied nutmegs, syrup of quinces, and syrup of coral, of each half an ounce; aromaticum rosalum, and astringent saffron of iron, of each two drachms; oil of cinnamon, six drops; mix into an electary (which may be made up by any apothecary, if the receipt be sent him) and take the quantity of a large nutmeg, every day at noon, for six, eight, or ten days, or longer, as the urgency of the case may require, drinking immediately after it twenty drops of the Lunar Tincture, in a wine-glass of warm water; the flooding, by this means, will gradually abate, the feverish symptoms will go off, the back will be strengthened, the womb-vessels cleansed, and the patient wonderfully restored. After the tenth day, in most cases, the electary might be discontinued, and the Lunar Tincture should then be taken every morning for a month, from twenty-five to fifty drops, according to the constitution of the patient; by which time the parts will be braced, comforted, and coiled up, so as to fear no danger of a relapse. About a month after, let her undergo a course of the Solar Tincture, for the purpose of rectifying and stimulating the mass of blood. This should be taken for a month; a table-spoonful, night and morning, in a wine-glass of cold spring-water, for the first ten days; and then once a day only, for the residue of the time; the good effects of which will be sensibly and quickly felt.

The intention of nature in returning this flux back into the habit, is to nourish and preserve life, not to destroy it. Until the age of puberty, girls require this blood for the sustenance and nourishment of their bodies; when that is sufficiently established, it is applied to the purposes of nourishing the foetus, and of suckling the infant after it is born. When child-bearing ceases, and the
eve

eve of life comes on, the flux is returned back, to comfort and preserve it; therefore, if women were but careful to observe a regular course before this flux returns upon them, by adopting the methods I have prescribed, and by taking the medicine spring and fall, for two or three years previously to the time, they might not only escape the perils and dangers attendant on this period, but would lay the foundation of a settled state of health, and enjoy a sound constitution of body to extreme old age.

OF MASCULINE OR SOLAR DISEASES.

SOLAR diseases are all such as proceed from a hot and dry cause, or have their origin in the blood and lymph. For as the beams flowing from the sun are the fountain of life and heat to the great world, or universal system of nature, so the blood, flowing from the heart, is the fountain of life and heat to the little world, or universal system of the *microcosm*, or body of man. And again, as the stream of rays from the sun regulates the seasons, and produces the variety of climates, so the stream of blood in man's body, as affected by the sun, regulates and diversifies the form and figure of the whole race of human beings. As seasons and climates are subject to the external elements, which are still governed by the superior influence of the sun, so are they rendered either mild, healthful, and productive; or turbulent, pestilential, and barren. Just so the whole circulating mass is affected, by change of climates and seasons, and by all the variations and agitations of the external elements; and hence diseases are induced in the blood, and are either mild, ardent, or acute, proportionably as the sanguiferous fluid becomes distempered and impaired by the action of the ambient or contiguous atmosphere. Thus we perceive the solar influence on the human frame,
and

and discover that the origin of the disease is in the blood; for no longer than is this vital stream kept in due circulation, pure, and uncontaminated, can animal life be sustained, or the body preserved in health and vigour.

From the express words of scripture, Levit. xvii. 11, 14; Deut. xii. 23, we are warranted to infer, that *in the BLOOD is the LIFE*; and there is not a doubt but the living principle of the blood constitutes the life of the body.

Of this opinion was the celebrated Harvey, as well as many of the ancient philosophers and physicians; and the late Mr. John Hunter declared himself to be of the same way of thinking. We find the blood unites living parts, in some circumstances, as certainly as the yet recent juices of the branch of one tree unite it with that of another. Were either of these fluids to be considered as extraneous or dead matter, they would act as stimuli, and no union would take place in the animal or vegetable kingdom. This argument Mr. Hunter established by the following experiment: Having taken off the testicle from a living cock, he introduced it into the belly of a living hen. Many weeks afterwards, upon injecting the liver of the hen, he injected the testicle of the cock likewise, which had come in contact with the liver, and adhered to it. In the nature of things, there is not a more intimate connection between life and a solid, than between life and fluid. For although we are more accustomed to connect it with the one than the other, yet the only real difference that can be shewn between a solid and a fluid is, that the particles of the one are less moveable among themselves than those of the other. Besides, we often see the same body fluid in one case, and solid in another. The blood will also become vascular, like other living parts. Mr. Hunter affirms, that, after amputations, the coagula in the extremities of arteries

ries form vessels, as may be seen by injecting these arteries; and he had a preparation by which he could demonstrate vessels rising from the centre of what had been only a coagulum of blood, and opening into a stream of circulation. If blood be taken from the arm, in the most intense cold which the human body can bear, it raises the thermometer to the same height as if taken in the most sultry heat. This is a strong proof of the blood being alive; for living bodies alone have the power of resisting great degrees both of heat and cold, and of maintaining, in almost every situation, while in health, that temperature which we distinguish by the name of animal heat. Blood is likewise capable of being acted upon by a stimulus; for it coagulates from exposure, as certainly as the cavities of the abdomen and thorax inflame from the same cause. The more it is alive, that is, the more the animal is in health, it coagulates the sooner on exposure; and the more it has lost of its living principle, as in case of violent inflammations, the less it is sensible to the stimulus produced from its being exposed, and it coagulates the later.

We may likewise observe, that the blood preserves life in different parts of the body. When the *nerves* going to any part are tied or cut, that part becomes paralytic, and loses all power of motion; but it does not mortify. If the *artery* be cut, the part dies, and mortification ensues. What keeps it alive in the first case? nothing but the living principle, which alone can keep it alive; and this phenomenon is inexplicable on any other supposition, than that the life is contained in the blood. Another argument is drawn by Mr. Hunter, from a case of a fractured os humeri. A man was brought into St. George's Hospital, for a simple fracture of the os humeri, or arm, and died about a month after the accident. As the bones had not united, Mr. Hunter injected the arm after death. He found
that



The Nerves of the Human Body

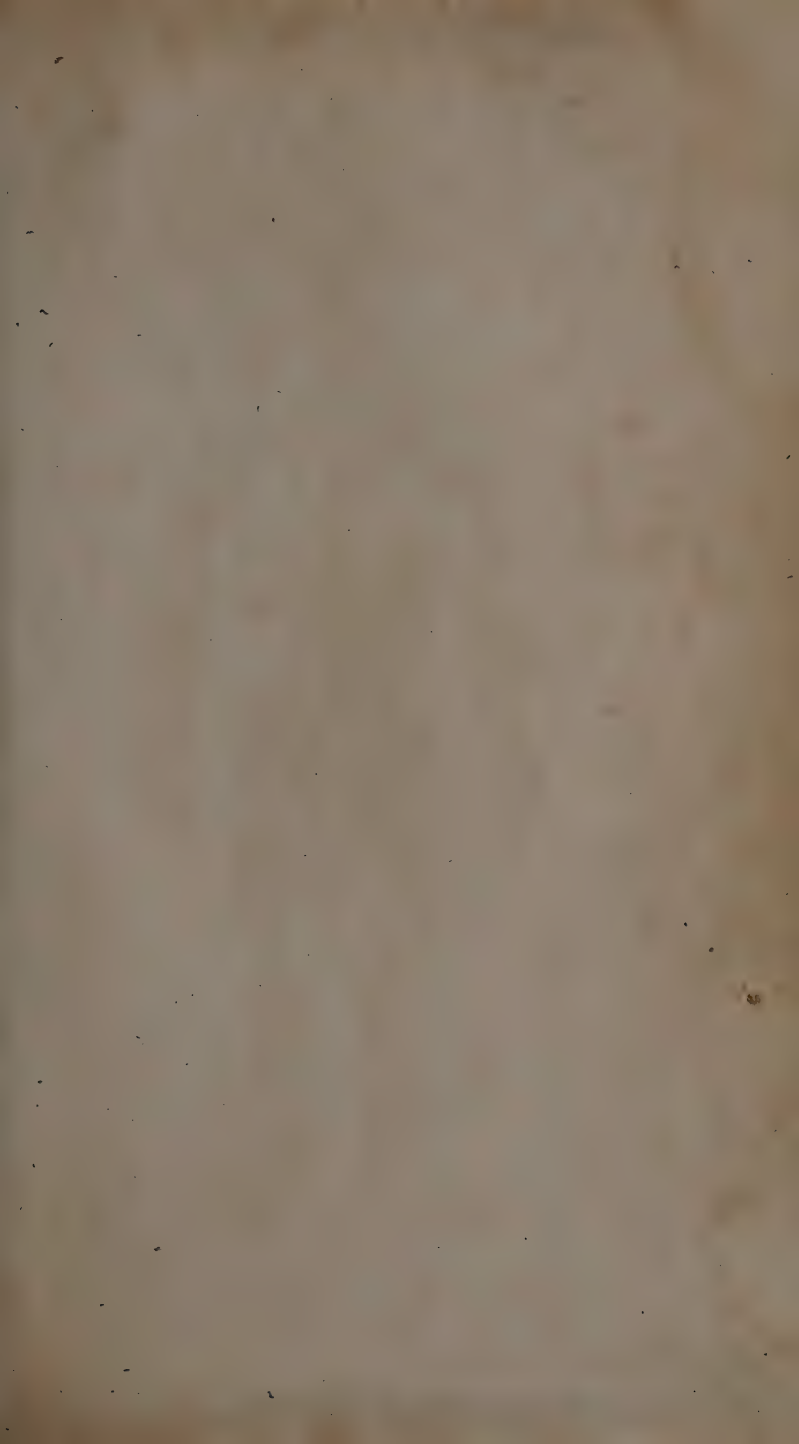
that the cavity between the extremities of the bones was filled up with blood which had coagulated. This blood was become vascular, or full of vessels. In some places it was very much so. He does not maintain that all coagulated blood becomes vascular: the reason is obvious; for it is often thrown out and coagulated in parts where its becoming vascular could answer no end in the system, as, for example, in the cavities of aneurismal sacs. If it be supposed that in such cases as the one now mentioned, the vessels are not formed in the coagulum, but come from the neighbouring arteries, it is equally an argument that the blood is alive; for the substance into which vessels shoot must be so. The very idea that such a quantity of dead matter, as the whole mass of blood, circulates in a living body is absolutely absurd.

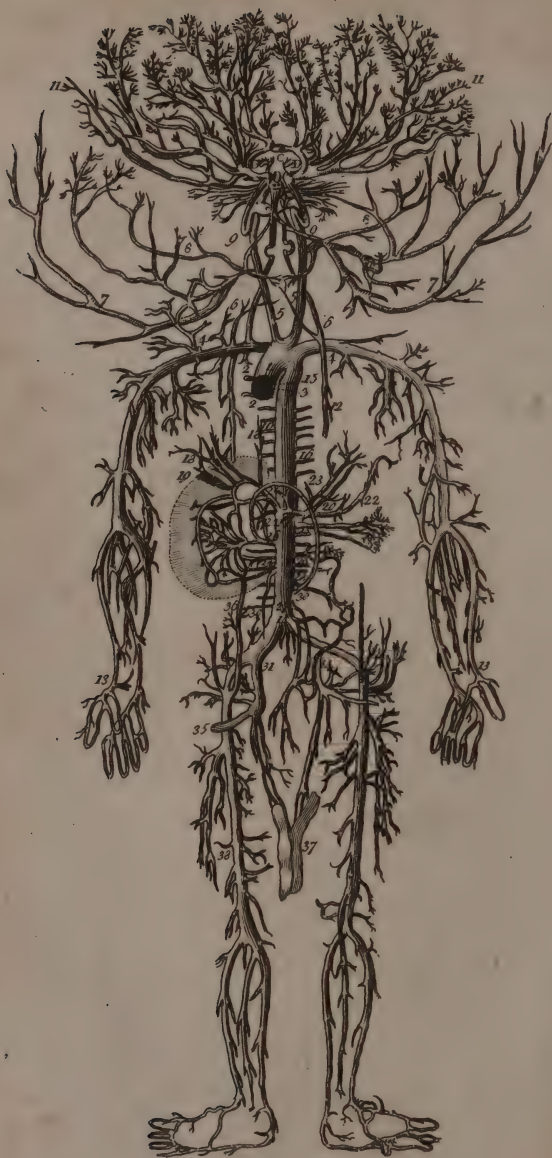
Those who have ventured to oppose this doctrine, and the evidence of scripture with it, consider the brain and nervous system as the fountain of life; and that, so far from receiving its life from the blood, the nervous system is capable of instantaneously changing the crasis of the blood, or any other animal fluid; and though the nervous system cannot continue its action for any length of time, if the action of the blood-vessels be suspended, yet the heart and blood-vessels cannot act for a single moment without the influence of the nervous fluid. For this reason, say they, it is plain we must suppose the nervous system, and not the blood, to contain properly the life of the animal, and consequently to be the principal vital organ. The secretion of the vital fluid from the blood, by means of the brain, is, by the supporters of this argument, denied. They say, that any fluid secreted from the blood must be aqueous, inelastic, and inactive; whereas the nervous fluid is full of vigour, elastic, and volatile in the highest degree. The great necessity for the circulation of the blood

through all parts of the body, notwithstanding the presence of the nervous fluid in the same parts, they say, is because some degree of tension is necessary to be given to the fibres, in order to fit them for the influx of the nervous fluid; and this tension they receive from the repletion of the blood-vessels, which are every where dispersed along with the nerves.

To follow this opinion through every argument, would prove tedious and unnecessary, as the following short observations will decide the matter absolutely against the patronizers of the nervous system. In the first place, then, if we can prove the life of the human body to have been communicated from a fluid to the nervous system, the analogical argument will be very strongly in favour of the supposition that the case is so still. Now that the case once was so is most evident; for the human body, as well as the body of every other living creature, in its first state, I have shewn to be a gelatinous mass, without muscles, nerves, or blood-vessels. Nevertheless, this gelatinous matter, even at that time, contained the nervous fluid. Of this there can be no doubt, because the nerves are formed out of it, and have their power originally from it; and, what is remarkable, the brain is observed to be that part of the animal which is first formed. Of this gelatinous or procreative fluid we can give no further account, than that it is the nutritious matter from which the whole body appears to be formed. At the original formation of man and other animals, therefore, the nutritious matter was made the substratum of the whole body, consisting of muscles, nerves, blood-vessels, &c. nay more, it was the immediate efficient cause of the nervous power itself*. Again, in the formation

* That in man there is a display of the vegetable as well as animal property, is clear and apparent from a view of his arteries





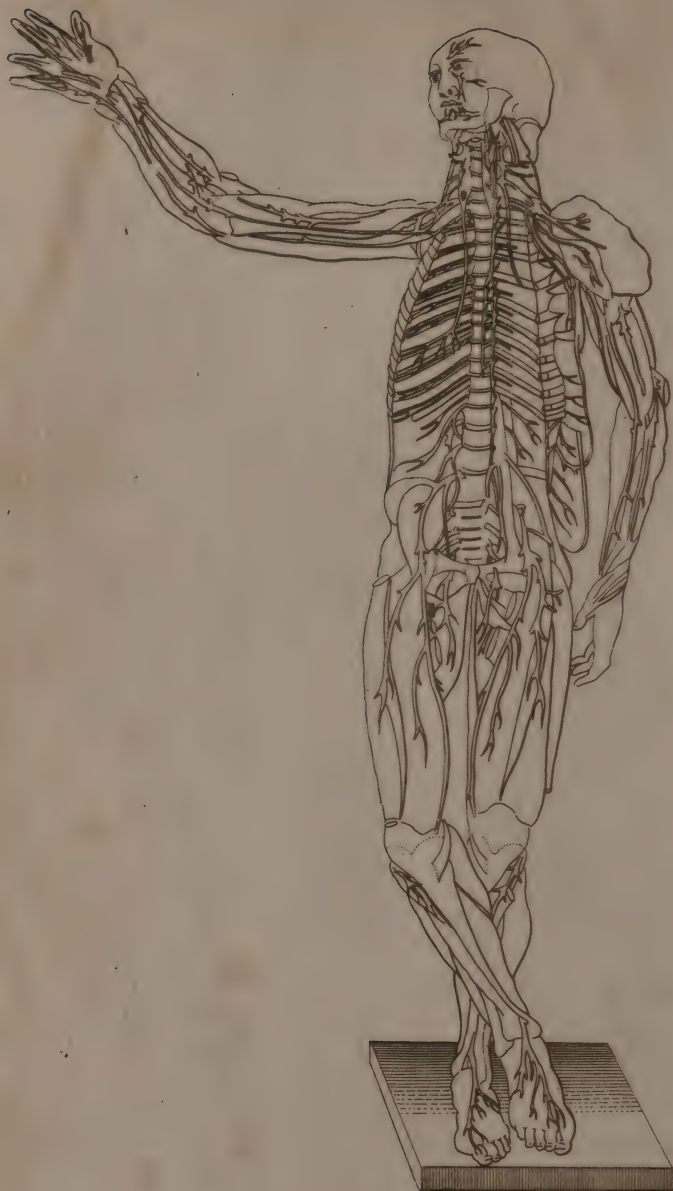
The Arteries of the Human Body

tion of the embryo, we see a vital principle existing, as it were, at large, and forming to itself a kind of regulator to its own motions, or a habitation in which it chooses to reside, rather than to act at random in the fluid. This habitation, or regulator, is undoubtedly the nervous system; but at the same time, it is no less evident that a nutritious fluid is the immediate origin of these same nerves, and of that very nervous fluid. Now we know that the fluid which in the uterus nourishes the bodies of all animals in embryo, is necessarily equivalent to the blood which nourishes the bodies of those which are adult; and consequently, as soon as the blood became the only nutritious juice of the body, at the same time the nervous fluid took up its residence there, and from the blood diffused itself along the nerves, where it was regulated exactly according to the model originally formed in the embryo. Perhaps it may be said, that the vital power, when once it hath taken possession of the human or any other body, requires no addition or supply, but continues there in the same quantity from first to last. If we suppose the nervous power to be immaterial, this will indeed be the case, and there is an end to reasoning upon the subject; but if we call this power a volatile and elastic fluid, it is plain that there will be more occasion for recruits to such a power than to any other fluid of the body, as its volatility and elasticity will promote

arteries and nerves, for they represent vegetation (*vide the plates*); the only order below them is mineral, to which the bones, in man, are analogous, and contain in them solidity, extension, and gravity, as well as vegetation: but if we examine the animal creation in him, we shall not only find all the properties of matter, the vegetation of plants, and the life and instinct of animals, but the free use and exercise of reason, or the intellectual faculties; a survey of which made the prophet exclaim, "*He has made us wiser than the BEASTS of the earth, and higher than the fowls of*

HEAVEN.

its escape in great quantities through every pore of the body. It may perhaps be objected, that it is absurd to suppose the blood capable of putting matter in such a form as to direct its own motions in a particular way : but even of this we have a positive proof, in the case of the electric fluid. For if any quantity of this matter has a tendency to go from one place to another, where it meets with difficulty (through the air, for instance) it will throw small conducting substances before it, in order to facilitate its progress. Also, if a number of small and light conducting substances be laid between two metallic bodies, so as to form a circle, a shock of electricity, for example, will destroy that circle, and place the small conducting substances nearer to a straight line between the two metals, as if the fluid knew there was a shorter passage, and had resolved to take that, if it should have occasion to return. Lastly, it is universally allowed, that the brain is a secretory organ, made up of an infinite number of small glands, which have no other excretories than the medulary fibres and nerves. As a considerable quantity of blood is carried to the brain, and the minute arteries end in these small glands, it follows that the nervous fluid *must come from the blood*. Now, there is no gland whatever, in the human or any other body, but will discharge the fluid it is appointed to secrete, in very considerable quantity, if its excretory be cut. Upon the cutting of a nerve, therefore, the fluid secreted by the brain ought to be discharged ; but no such discharge is visible. A small quantity of glairy matter is indeed discharged from the large nerves ; but this can be no other than the nutritious juice necessary for their support. This makes it plain, even to demonstration, that the fluid secreted in the brain *is invisible* in its nature ; and as we know the nervous fluid hath its residence in the brain, it is very probable, to use no stronger expression,



The Veins of the Human Body

expression, that it is the peculiar province of the brain to secrete this fluid from the blood, and; consequently, that the blood must originally contain the vital principle.

From the foregoing observations, we may safely conclude that the mass of blood is the universal medium by which life is propagated, and health preserved, in every class of beings; and that, in its impure or infected state, it is the source whence the endless number of hereditary diseases derive their origin. Whatever fault impairs the parent blood, fails not to taint the tender habit of its young; whence it has become an established maxim, that as healthy parents naturally produce healthy children, so diseased parents as naturally produce a diseased offspring. Some of these diseases appear in the earliest infancy; some occur equally at all ages; whilst others lurk unsuspected in the habit to extreme old age, or even to a new generation, slowly impairing the vital organs, and gradually undermining the constitution, before their source and fatal tendency can possibly be discovered. There are some diseases, indeed, which, though born with us, cannot be said to be derived from the parent; as when a foetus receives some hurt by an injury done to the mother; while others, neither born with us, nor having any foundation in the constitution, are sucked in with the nurse's milk. Let it then be the care of every parent, who from some local misfortune is so far compelled to depart from the ties of nature as to abandon her tender offspring to the breast of another, to be satisfied, as far as human foresight and medical penetration can reach, that the constitution and blood of the nurse is free from scrofula and every other hereditary impurity.

Accidental diseases, though not derived from the parents, nevertheless, in general, spring from the blood; which constituting or propagating animal life

life through every part of the body, is necessarily exposed to every external offending cause, from which impression particular accidental diseases ensue. The climate itself under which people live will often produce these affections in the blood; and every particular climate hath, more or less, a tendency to produce a particular disease, either from its excess of heat or cold, or from the mutability of the weather. An immense number of diseases are also produced in the blood by impure air, or such as is loaded with putrid, marshy, and other noxious vapours. The same thing likewise happens from high-seasoned or corrupted aliment, whether meat or drink; though even the best and most nutritious aliment will hurt, if taken in too great a quantity; not to mention poisons, which are endowed with such pernicious qualities, that, even when taken in the smallest quantity, they produce the most grievous ferment in the blood, ending perhaps with death itself. There are likewise other accidents and dangers to which mankind are exposed, that ingraft innumerable diseases in the mass of blood; such as the bite of venomous reptiles, or of a mad dog; an injudicious inoculation or mistreatment of the small-pox or measles; the psora, or itch; the venereal infection; also broken limbs, wounds, and contusions; which, though proceeding from an external cause at first, fail not to impair the blood, and often terminate in internal diseases and premature death.

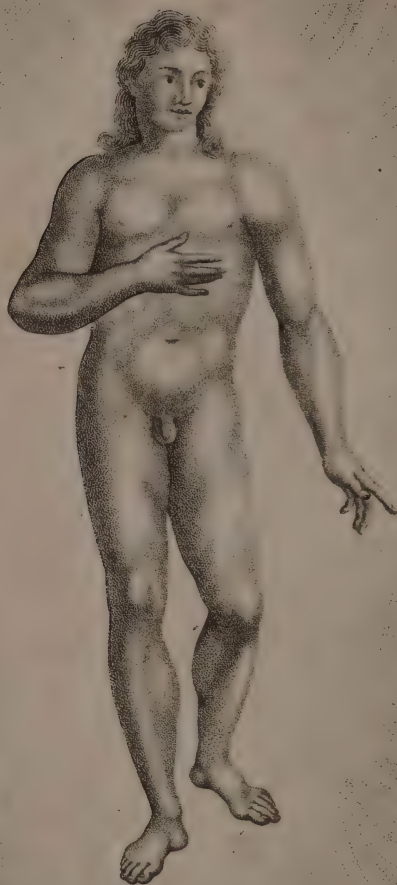
Man, however, is not left without defence against so many and such great dangers. The human body is possessed of a most wonderful power, by which it preserves itself from diseases, keeps off many, and in a very short time cures some already begun, while others are, by the same means, more slowly brought to a happy conclusion. This power, called *autocrateia*, or *vis medicatricis naturæ*, is well known both to physicians and philosophers, by whom

whom it is most justly celebrated; for this alone is sufficient for curing many diseases, and is of service in all. Nay, even the best medicines operate only by exciting, and properly directing, this expulsive force, by which the excrementitious humours from the aliments and blood are expelled through the proper channels of evacuation, as well as through the excretory ducts, chiefly by means of the *insensible perspiration*; by the power of which, the offending humours of the blood and juices are perpetually flying off. But though physicians justly put confidence in this power, and though it generally cures diseases of a slighter kind, yet it is not to be thought that those of a more grievous tendency are to be left to the unassisted efforts of the footsteps of nature. Physicians have therefore a twofold error to avoid, namely, either disposing the ability of the *vis medicatrix* too much, which if left alone would work a radical and perfect cure; or, putting too great confidence in these exertions of nature, they are left unseconded and alone, till the virulence of infection or disease undermines the constitution, and bears down all before it.

The grand and perpetual means by which the foul and offending humours in the blood and juices are continually carried off, is undoubtedly through the perspirative pores and vessels, which it is highly compatible with sound health to keep open, and for which purpose medicaments are principally used. When this evacuation is copious and gross enough to be discerned by the eye, as in sweat, the perspiration is said to be sensible; but where it is so volatile as to escape the notice of the senses, as is the case in the ordinary state of the body, it is called *insensible perspiration*. The vessels through which the perspiration is performed lie obliquely open, under the squammæ, or scales of the cuticle or scarf-skin. They are inconceivably small; from a calculation of Lewenhoeck, it appears that the mouths

mouths of one hundred and twenty-five thousand of them may be covered with a common grain of sand. The most considerable of these pores are the orifices of the ducts arising from the milliary glands. Through these vessels there is continually transuding a subtilè humour, from every point of the body, and throughout the whole expanse of the cuticle. The matter evacuated this way is found by certain experience to be more than equal to that evacuated all the other ways, *i. e.* by stool, urine, &c. Sanctorius found in Italy, under the circumstances of a moderate diet, middle age, and easy life, that the matter insensibly perspired was five-eighths of that which was taken in for food: so that there only remained three-eighths for nutrition, and for the excrements of the nose, ears, intestines, bladder, &c.

The same author shews, that as much as is evacuated by insensible perspiration in one day as by stool in fourteen days; particularly, that in the space of a night's time, about sixteen ounces are ordinarily discharged by urine, four ounces by stool, and above forty ounces by insensible perspiration. He also observes, that if a man eat and drink eight pounds in a day, five pounds of it are spent in insensible perspiration; and adds, as to the times, that, within five hours after eating, there is perspired about one pound; from the fifth to the twelfth hour, about three pounds; and from the twelfth to the sixteenth, scarcely half a pound. M. Dodart, from a number of experiments, made thirty-three years successively, proves that we perspire more in youth than in age. In some persons the perspiration is so copious, that they void very little of the coarser excrements, though they eat heartily. The benefits of insensible perspiration are so great, that without it animal life could not be preserved. The general cause of perspiration is the circulation and heat of the blood, which enables



The Insensible Perspiration.

it to throw off the offending matter. The great subtilty, equability, and plenty of the matter thus perspired, its increase after sleep, &c. constitute the grand symptoms of a perfect state of health; and the chief means of preserving the same. On the contrary, the departing from these is the first sure sign of approaching diseases.

Perspiration is performed, preserved, and increased, by the viscera, vessels, and fibres; by motion or exercise, as far as the first appearance of sweat; by a moderate use of venery; by sleep of seven or eight hours, the body well covered, yet not loaded with bed-clothes; cheerfulness; light, fermented, yet solid, food, not fat; pure, not heavy, air, &c. The contraries of all these, as also the increase of the other excretions, diminish, prevent, and deprave it. Hence we see the cause and effect of this perspirable matter, its use in preserving the parts soft and flexible, and in supplying what is lost, but chiefly in preserving the nervous papillæ moist, fresh, lively, and fit to be affected by objects, and to transmit their impressions. Hence it is, that upon a stoppage of the usual perspiration there arise so many indispositions, particularly fevers, agues, rheums, &c. Too much perspiration occasions weakness, and swoonings; whilst too little, or none at all, occasions the capillary vessels to dry, wither, and perish. Hence also the larger excretories come to be obstructed; hence the circulation is disturbed, sharp humours retained; and hence putridity, crudity, fevers, inflammations, and imposthumes. Cold prevents perspiration, by constringing the pores of the skin, and thickening the liquors circulating in the cutaneous glands; heat, on the contrary, augments it, both by opening the excretory ducts of the glands, and by increasing the fluidity and velocity of the humours. To determine the state and conditions of the perspiration, so necessary for judging of those of the body,

Sanctorious invented a weighing chair, whereby he examined the quantity, degree, &c. of perspiration in several circumstances of the body, under several temperatures of the air, and in several intervals of eating, drinking, sleeping, &c*.

Some

* It is an observation of this learned Philosopher, that if a physician understands only sensible perspiration and evacuation, and knows not how to regulate the insensible, he does not cure, but afflict his patients; therefore, that the reader may be enabled to investigate this part of physiology more fully, we will subjoin the following aphorisms:

1. Insensible perspiration is transpirable through the pores in every part of the body, and is the excrement of the third concoction; so that if those who have weak stomachs are not capable of perfecting the first concoction, the third cannot be fully accomplished, and therefore inclines the body to various diseases.

2. Redundant perspiration and much sensible evacuation together are inconsistent; also, a copious sensible evacuation, with a deficiency of perspiration, is evil; and this perspirable matter retained, not being resolved by nature, or some disease supervening, immediately disposes the body to a malignant fever.

3. The external causes that hinder perspiration are cold, foggy and moist air, much labour and pain of the body, swimming in cold water, viscous clammy meats, or want of exercise to body or mind; ponderous water, and foggy air, turn the perspirable matter into an *ichor*, or sharp humour, which afterwards causes a cachexy.

4. Insensible perspiration being quite obstructed in the brain, causes *apoplexy*; in the heart, causes *palpitation*; in the matrix, *suffocation*; but in the extreme parts, a *gangrene*.

5. The present effect of immoderate venery is the refrigerating of the stomach, which consequently hinders perspiration: whence comes palpitations and a weakness of the eyes, joints, and the principal members.

6. Those kinds of meat which are most digestible produce the best kind of perspiration; for where there is a difficulty of digestion, there is also a difficulty of perspiration: suppers eaten with the mind troubled, do not properly digest; and nothing retards perspiration more, than to drink when the chyle is forming in the stomach.

7. Exercise of the body promotes the evacuation of sensible excrements, but that of the mind insensible ones. Riding promotes the perspiration most above the loins; ambling is most wholesome; trotting is replete with many evils; but
the

Some of the more extraordinary phenomena observed in this speculation, are, that for some time after eating the perspiration is least of all; that between the fifth and twelfth hour after meals, perspi-

the violent motion of a coach evacuates the crude uncocted perspirable matter, and hurts the solid part of the reins.

8. Violent exercise, where the wind blows, is evil; for the wind stops the perspiration, and the motion makes it acrimonious: by violent exercise the fibres grow hard, whence comes old age; but softness of the fibres, keeping them open, makes long life; but in cold and clear air, although perspiration is stopped, by the pores being condensed, yet as the fibres are roborated, the retained perspirable matter is neither felt nor does hurt; but in foggy air, the perspirable matter is retained by the absorbent vessels being filled with the aqueous property, consequently the fibres are relaxed, and the perspirable matter felt, and very hurtful.

9. By yawning and stretching of the joints, there are great endeavours of nature to void the retained perspirable matter; and to apprehend that we feel ourselves more light than we really are, is a most wholesome state, for that weight of the body is a standard of health, when a person can ascend a steep place with ease.

10. Those who make more urine than is proportionate to their drink, perspire but little; weak persons evacuate the perspirable matter in their urine more in the winter than in the summer; but robust and strong constitutions more in the summer than in the winter; so weak constitutions perspire more in the night than in the day; but robust people more in the day than night; but from the autumnal equinox until the winter solstice, there is every day about a pound of perspirable matter retained; but in summer the retained perspirable matter turns sooner acrimonious than in winter; and, if turned to acrimony in summer, it brings on a malignant fever; but, if operated upon by an external heat, violent motion, or a long continuance, it will produce an inflammation in the bowels.

11. By sadness and fear, the lightest of the perspirable matter is emitted, but joy or anger discharges the heavy with the light. Grief breeds obstructions, hardness of the parts, and hypochondriacal affections; but a contented mind gives a free and equal perspiration.

12. A youthful face is preserved by avoiding sweating, or perspiring too much through heat; but continual exercise, both of body and mind, brings on quickly old age and untimely death.

ration is greatest; that riding either on horseback, in a coach, or ship, &c. brisk motion on the ice, &c. but, above all, a brisk friction of the skin, promotes perspiration surprisingly; and that perspiration is naturally much less in women than in men. Perspiration is influenced by the passions of the mind. Thus anger and joy increase, and fear and sadness lessen, both perspiration and urine. Anger causes a strong motion in the membranes of the heart; it irritates the arteries and the muscular system, and thus quickens the contraction and dilatation of the blood-vessels and secreting ducts; and of consequence it increases the discharges of perspiration and urine; and that more or less, in proportion to the strength and continuance of the passion. Joy affects these discharges in like manner as anger. In the passions of fear and sorrow, perspiration and urine are lessened, by the depression of the activity of the soul under those passions. The proportion of perspiration to urine is augmented by all those exercises which increase the motion of the blood, and warm the skin.

We have an account of a person who, by passing many nights in astronomical speculations, had his perspiration so obstructed by the cold and damp of the air in Holland, that a shirt he had worn for a considerable time was almost as clean as if it had been worn but one day. The consequence of this was, that he gathered subcutaneous waters, but was cured in time. The garments best calculated to encourage and promote insensible perspiration, to keep the mouths of the minuter vessels open, and to guard the body from the too sudden and violent effects of cold, are those made of flannel. Whence flannel shirts and waistcoats, or a square piece of flannel worn over the breast, or pit of the stomach, particularly in the winter months, are productive of such beneficial effects to weakly and debilitated constitutions, and act as a valuable preservative to
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the hale and robust. In the annexed copper-plate engraving, I have endeavoured to shew the manner in which the insensible perspiration issues from the pores of the body, which can only be discerned by means of a lens; being of so volatile and subtile a quality, that it passes through our garments with the utmost ease, particularly if woollen; and it even ascends through the bed-clothes like a mist, in the greatest abundance when we are asleep, and the other animal functions at rest.

In this manner nature endeavours to relieve herself from all casual obstructions; and so long as diseases are recent, and of a mild tendency, they are usually carried off by this means, without requiring any aid from medicine. When, however, diseases are of long standing, and the humours in the blood become too foul and viscous to be thrown off by the *vis medicatrix naturæ*, the whole habit is quickly vitiated, and the circulating mass becomes morbid; yet even in this infected state, the vital heat and activity of the blood strive to purify it, by determining these morbid particles to the skin, where they form scabs, ulcers, pimples, and other spots, as in the scrofula, leprosy, small-pox, measles, syphilis, &c. or else the virulent matter is directed inwards, where falling upon the lungs and other viscera, death quickly ensues. Here then we may view the shocking consequences which result from those who enter into matrimony under a tainted or infected state of the blood. Indeed, persons who are afflicted with the leprosy, scrofula, or king's evil, should never marry until a perfect cure has been happily effected, and a pure and healthful state of the blood induced. To enter into wedlock under a venereal taint, is an unwise, a most cruel, and a most ungenerous act. A man, with only a slight infection, by contact with the woman, will himself, perhaps, experience a perfect cure, in consequence of the foul and infectious matter

matter being drawn from the parts by the female organs, seconded by the action of the rugæ and absorbent vessels on the surface of the vagina. But the unhappy female is sure to take the disorder, and, should she prove with child, she not only carries the poisonous infection into the marrow of her own bones, but brings an infant offspring into the world, devoted to misery and disease; for whatever foul and infectious humour is implanted in the parent blood, it is immediately carried, by the circulation, to the vital organs of the child, just as the flame of one candle is by contact communicated to another. Nor can we be surprized at these things, if we only reflect on what has already been adduced, and contemplate the system and economy of the human frame. Consider only the powerful effects of a few grains of cantharides, which, if externally applied, act as a burning caustic; but if taken into the stomach, instantly overturn the natural course of the circulation, by forcing the whole mass of blood into the extremities, but more particularly, with great vehemence and turgidity, into the privities; for which reason cantharides are taken with intent to cure the weakness and debility of the penis; but the truth is that it produces a greater debility; an emaciated constitution is sure to follow, and, not unfrequently, instant death.

If, then, so powerful an effect can be wrought on the blood by swallowing a few irritating particles of a small insect, may we not justly infer, that by infusing into the circulating mass, particles congenial to itself, the utmost relief may be afforded to it, even in the most depraved and inactive state? From this consideration alone, we may venture to pronounce, that all disorders originating in the blood, might either be prevented or repelled, were such a medium discovered, by which we might infuse immediately into the mass a combination of
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such elemental principles as the blood and juices themselves consist of, in their purest and most elastic state; for this, in fact, is the aim of all medicines; but which they miss by being administered in their gross form, and being obliged to pass the several digestive operations of the stomach, before they can reach the blood, whereby the principal part of their occult virtue is lost among the food, or secreted in such small quantities as to produce very little effect. But such a medium, possessing these congenial principles, ready digested, and so combined as to be taken instantly, and without diminution, into the habit, would not only keep the cruor and serum in that due proportion which is so essential to health, but would stimulate, correct, purify, and augment the blood, as its reduced or disordered state might from time to time require. Such a medium, after infinite labour, and unlimited experience, I pronounce the Solar Tincture to be; and such will be found its operative effects, under whatever circumstances it may be administered, in any climate or season; the innocent and balsamic qualities of which are as grateful to the internal organs of the human frame, as the solar rays are cheering to the external; and it affords me no small gratification to avow, that, in offering it to the public, I invade no man's property, nor imitate any medicine at present known in public or private practice. The experiments I have made with it upon a variety of diseased wretched objects, are innumerable; and I shall still continue to administer it *gratis to the REALLY poor*, who are given over by others, or who have not the means of applying for medical assistance.

The infinite variety of complaints an impure or infected state of the blood induces, almost exceeds belief; and hence the new and deceptive forms a scrofulous or scorbutic taint puts on, which often deceive the most eminent of the faculty, and baffle the

the best intention towards a cure. An impure or scrofulous taint will pervade the noblest organs of the human frame, before the patient can be aware of his danger. In the first stage of its visible effects, a wearying pain seizes the joints and muscles, attended with a wasting of the legs and loins. In the second stage, the gums swell, grow painful, hot, and irritable, and bleed upon the slightest pressure; the roots of the teeth become bare and loose, and the breath nauseous. In the third stage, the gums grow putrid, the teeth black and rotten, the sublingular veins become varicose, and the breath cadaverous; foetid blood distils from the lips, gums, mouth, nose, lungs, stomach, liver, spleen, pancreas, intestines, womb, kidneys, &c. scabs and ulcers break out in all parts of the body, and the joints, bones, and viscera become morbid. In the fourth stage, putrid, eruptive, and spotted fevers ensue, which end in an atrophy, or else follow diarrhœa, dysentery, dropfy, consumption, palsy, contractions, melancholy, and all the long and direful train of nervous disorders, which to describe would fill a volume.

To counteract this most virulent of all chronic complaints, the utmost exertions of human skill have been employed. The remedies prescribed in its different stages are almost innumerable. The object is to reduce the virulence of the infection, and to eradicate its seeds from the blood and lymph; for which end the mildest and most simple medicines are recommended. Mineral and tar waters, for their warm and stimulating quality; milk or whey, from their similitude to the chyle; the cold bath, for bracing the solids, and quickening the circulation; antiscorbutic vegetables, &c. for purging and sweetening the blood, such as scurvy-grass, water-creffes, wormwood, hemloc, centaury, vervain, water-trefoil, juniper-berries, the Peruvian bark, saffrafas, guaiacum, aloes, assafœtida,

assafoetida, camomile, diascordium, saffron, fenna, rhubarb, manna, Æthiop's mineral, hartshorn, native cinnabar, antimony, &c. When these fail, mercury, or a mercurial salivation, is looked upon as the only cure; which, in fact, is but to give the human frame its last vehement shock, and to send the wretched patient in agonies to the grave!

The intention of all these remedies is to impregnate the blood with qualities opposite to those with which it is infected; and this must be done in a superior degree of force and power, before a cure can be completed. But these medicaments are often administered under such nauseous forms, and in so crude and unqualified a state, that they not only torture the patient, but miss entirely their intended aim. The nauseous taste of medicine is nothing but its grosser particles; which, instead of entering the stomach to irritate and oppress its organs, ought to be drawn off by chemical process; for it is the occult virtue of every drug, not its grosser part, that performs the cure.

Now the peculiar excellence of the *Solar Tincture* is, that it combines the essential and occult virtues of all scorbutic vegetables, ready digested, concocted, purified, and resolved into an elegant balsamic essence, pleasing to the taste, and grateful to the stomach. It flies immediately to the heart, whether internally or externally applied, blends and assimilates with the venal and arterial blood, which it generates, corrects, warms, purifies, animates, and impels, through the whole system. It cleanses all the viscera, and glandular parts, especially the lungs and kidneys; stimulates the fibres, whereby the gastric juice and digestion are promoted; dissolves viscid humours, and expels infection. It exerts very considerable effects on the whole nervous system, sensibly raises the pulse, strengthens the solids, and invigorates the animal spirits. It penetrates into the most innate parts, opens the mouths of the minuter vessels, restores

the natural perspiration, and promotes all the fluid secretions. In every stage of infectious diseases, and in all sudden epidemical disorders, which usually follow from wet, putrid, and unwholesome state of the atmosphere, it is an absolute specific; and as a preventative, alterative, and purifier of the blood, it has not its equal in the world. It quickly relieves every common malady originating in the blood, such as relaxations, debility, lassitude, tremours, sinking of the spirits, and all those nervous affections which harass and oppress the weak, sedentary, and delicate; and are often the consequences of high living, and luxuriant indulgences, without bodily exercise and fresh air. In all these cases, the Solar Tincture is calculated to warm and strengthen the cold tremulous nerves; to sheath and invigorate the muscular system; and to animate the spirits, and renovate the whole man; whereby the chill watery fluids become rich and balsamic, and the circulating mass resumes its healthful state. It is an infallible cure for joint-aches, cramps, spasms, rheumatic gout, nervous head-ache, agues, and all disorders arising from obstructed perspiration. In complaints of the breast, stomach, and bowels, it gives immediate relief; and in asthmatic and consumptive cases, is an elegant and expeditious cure. It will stop mortification in very advanced stages, by expelling the poisonous matter, and correcting the juices of the whole body. It requires no argument to convince, more than a single trial; after which, I think, no family who value their health or life will choose to be without it; particularly under any of the following afflictions:

SCROPHULA, SCURVY, OR KING'S EVIL.

IN the first and second stages of this disorder, a small table-spoonful of the Tincture, taken in a wine-glass of cold spring-water, night and morning,

ing, will prevent the further progress of the disease, and in a very short time restore the blood to its healthful state, the effects of which will be so obvious to the patient, that he will be at no difficulty when to discontinue the medicine. In the third stage, it is often requisite that the medicine be internally and externally applied. The mouth should be frequently washed with the Tincture, diluted in warm water, and it will very soon expel the poison from the gums. If the viscera be in a morbid state, which may be known by the excrements, or foulness of expectoration, it will be necessary to take the medicine, night and morning, for several days, in the quantity of a table-spoonful *undiluted*; and at noon, a table-spoonful in the same quantity of warm water. The scabs, whether dry or moist, should be frequently washed with the Tincture, *undiluted*, which being absorbed by the minuter vessels, and taken into the habit, will expel the humour, and clear away the scurf. If tumours or foul ulcers occur, wash them frequently with a dilution of the medicine in the same quantity of warm water, until the heat and virulence be abated; then apply the Tincture, *undiluted*, with lint or fine rags, by which means the infectious matter will be totally eradicated, the blood and juices purified, and the ulcers healed.

In the fourth stage, whatever may chance to be the sad malady to which the disorder ultimately turns, a strict attention to regimen, exercise, and fresh air, as far as the strength and condition of the patient will admit, must be particularly attended to. And, in all these cases, the best and most simple methods of treatment are laid down in the medical part of my Family Physician, page 168, &c. to which I beg leave to refer every patient in this dreadful stage of the disease; and, in aid of the advice there given, let the Solar Tincture be regularly persisted in, every night and morning, in the

quantity of one table-spoonful in as much warm water; and, at twelve o'clock at noon, take a table-spoonful *undiluted*.---Let this be continued eight or ten days; then take a table-spoonful diluted in warm water three times a day, morning, noon, and night, till the nerves and organs begin to resume their healthful tone; then let the doses be gradually abated to a spoonful in water every other morning, which should be continued till health is perfectly re-established; and which, by God's blessing, will generally happen, even in these desperate cases, in the course of a month or six weeks. ---As a preventative of all foul or scrofulous taints in the habit, and as an alterative, and purifier of the blood, it may be occasionally taken every other morning, for a week together, particularly in the spring and fall, in the quantity of a table-spoonful in a wine-glass of cold spring-water; or it may be occasionally taken as a beverage after dinner or supper, mixed in a tumbler with warm water, and made palatable with sugar. It will be found pleasant to the taste, and grateful to the stomach, superior to any spirits or punch. The many instances of elegant and uncommon cures effected by the Solar Tincture, on persons of the first eminence, may be inspected at any time, on application at my house. But, at the particular request of the party, I have here added the following remarkable

C A S E.

Mr. R. Pinder, of Bramstone, near Bridlington, in Yorkshire, had been long afflicted with a violent scorbutic humour in his blood, which threw out sometimes dry and sometimes moist scabs and tumours on the skin. Being neglected, it at length pervaded the whole system, till, turning inwardly, it fell upon his lungs, and reduced him to the last stage of a consumption. In this deplorable state,

given



The Muscles of the Human Body

given over by the faculty, left totally emaciated, and incapable of turning in his bed, he fortunately had recourse to the Solar Tincture. The first dose was given *undiluted*, which threw him into a fine perspiration, and composed him to sleep, which had long been a stranger to his eyes. After one large bottle had been administered agreeably to the bill of directions, at the end of a week he was so much restored, that with very little assistance he was enabled to put on his own clothes; and, after continuing the medicine for little more than a month, he was able to walk abroad. And now, having continued the Tincture night and morning, and occasionally using it as a beverage made similar to warm brandy and water, he has quite recovered his former health and strength; being, to the surprise of every body who beheld him in his late emaciated condition, as robust and hearty as it is well possible for a man to be.

DEBILITATED, TAINTED, AND ENFEEBLED CONSTITUTIONS.

MUSCULAR debility was a misfortune but little known to our forefathers. Whether innured in venereal embraces, or sacrificing at the shrine of Bacchus, moderation and seasonable hours directed the measure of their enjoyment. If revelry or voluptuousness by chance unstrung their nerves, gymnastic exercises and field-sports, or the more pleasurable delights of the chase, quickly restored them to their proper tone, gave new vigour to the blood, health to the cheek, and lighted up afresh the flame of love. But now, how strange the reverse! Habituated to effeminacy, and fed with dainties; revelling all night with wine, and stretched on beds of down all day; shut up in stews and brothels, scarcely breathing wholesome air; clasped in the arms of tainted or diseased females, until enjoyment palls upon the senses, and the muscular powers

powers absolutely refuse their office ; no wonder so many men are found old in every thing but years ; whose constitutions are fairly worn down ; blood stagnant, solids relaxed, secretions diverted from their proper course, muscles debilitated, eyes sunk, palid cheek, and spirits gone. These are not half the evils resulting from this fashionable source of destructive folly. It may not be amiss, however, to describe the remarkable cases of a few, of whom the Solar Tincture has made perfect cures, by infusing a new portion of health into the mass of blood ; sincerely hoping, that a more wise and manly course of life will shortly eradicate these disgraceful complaints, and restore to the ladies a genuine race of Englishmen and Britons.

CASES.

PREMATURE DEBILITY.

A gentleman in the army, under thirty years of age, complained to me, that he had all at once *become incapable of enjoying his wife*. Suspecting he was not married, I desired him to be open and candid, to relate to me his *real* situation, and not a *pretended* one, which was only to impose on his own understanding. He thanked me for the rebuke, said he would be frank, and in a few words declared, that from excessive lust, and continual debauch, he had lost his virility ; and, to add to the misfortune, he was really on the eve of entering into the marriage state. In other respects he felt no diminution in his health or constitution ; and from external appearances, this was surely the last imperfection that could have been suspected. His complexion was vigorous and lively, his flesh firm, and constitution excellent ; yet, notwithstanding this, he was impotent to such a degree, that neither the strength of his own desires, nor the excitations of the female, could affect the part. It
often



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often happens, that though the organs remain sound, yet if the nervous and seminal fluids have degenerated from a healthful state--if they are impoverished by being too much drained, or turned into an unnatural course, they cannot then perform their office, because their moving powers, and stimulus on the blood, are become too weak to direct their force and action in the manner nature requires in the act of copulation. I therefore enjoined him to abstain entirely from all attempts of the kind for three months at least; directed the ointment as in page 240 of the medical part of my Family Physician, with the Solar Tincture three times a day for two months; then twice a day, until he found it no longer necessary. After taking six large bottles, he generously thanked me for a more hale and robust state of body than he ever remembered to have enjoyed before. He has since sent me several patients, in almost as debilitated a state as he was himself, who are now ready to unite with him in giving full testimony to the renovating powers and peculiar efficacy of the Solar Tincture.

A RELAXED HABIT.

LITTLE more than three months ago, a gentleman, about fifty years of age, lately returned from the East-Indies, applied to me for the cure of what he termed a *broken constitution*. He had made very free with the fable beauties of Bengal--had undergone a mercurial salivation, and appeared to be sinking under an universal languor and debility of the whole muscular system. The sphincter of the bladder was so weakened, that the urinary secretion came from him by drops, in so perpetual and involuntary a manner, as not to be perceived until the moisture of one set of cloths became so sensibly afflicting, as made it necessary to supply fresh ones, which usually happened every hour. The corporeal functions were dissipated and relaxed,

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and the tone of the stomach and viscera was nearly gone; the tremulous nerves reluctantly performed their office, and the circulation was become stagnant and morbid. I advised an immediate recourse to the most nourishing food, with strong port-wine negus for his drink; and the Solar Tincture to be taken four times a day for the first month; three times a day for the second month; and once or twice a day afterwards, as occasion might seem to render necessary. Before the expiration of twenty days, the sphincter muscle acquired its proper tone, the pulse became strong and regular, and the nervous tremours were considerably abated. By the end of the second month, a renovation of the whole animal economy seemed to have taken place, and a visible accumulation of the blood and juices had retrieved the circulation. Before the expiration of three months, I had the gratification to see this patient restored to such a state of bodily health and strength, as utterly astonished himself, by this course of the Solar Tincture.

HYPOCHONDRIACAL DEBILITY, OR WEAK NERVES.

A gentleman in Oxfordshire lately came to town on purpose to consult me in this complaint. He appeared to be near thirty years of age, of middling stature, but of a weakly constitution. He had, for upwards of seven years past, paid his addresses to a lady, whom he had long promised, and very much desired, to marry; but whenever he proposed in his mind to fix the day, or whenever it happened that he attempted to salute or embrace her, he was seized with an unaccountable tremour of the whole body; his spirits sunk, his virility left him, and a violent palpitation of the heart ensued. In short, he was so distrustful of his own powers, that he confessed it was the fear of not being able
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to perform the rites of the marriage-bed, that had been the only and the sole cause of thus protracting his wedding-day. This is certainly a most singular instance of the hypochondriacal affection, and of its derangement of the nervous system. The debility induced by it seems to arise from the weaker energy of the brain, the fault of which, however, cannot be detected by the nicest anatomist. For this reason, we are not well acquainted how such a defect should be restored; but as nature, seemingly for this purpose, excites the motion of the heart and arteries, we must ascribe the continuance of such debility to the too weak re-action of the sanguiferous system. The heart will generally palpitate from a violent excitement of the nerves, especially when the blood is endowed with too small a share of stimulus. Hence, therefore, palpitation from any affection of the mind, and from hysterics in women. Under whatever circumstances this hypochondriacal affection happens, it debilitates the whole animal machine, and renders the person unable to perform the proper offices of life. The prostration of spirits, added to weakness and languor, are often surprisingly great, though the pulse seem tolerably strong, as being heightened by animal desire. The effect, however, is sure to produce a languid circulation, the blood seeming to adhere, with uncommon energy, about the region of the heart. I suspect it is in these cases that cantharides are most frequently used. This patient, upon interrogation, acknowledged indeed, after some hesitation, that he had tried them; but they only produced an involuntary though violent erection, by no means adapted to the cure, nor to the purpose he intended. Hence this remedy is not only inadequate, but must prove extremely dangerous; for it too much exhausts the vital powers, and is followed by a vast dejection of spirits, tremours, starting of the

tendons, &c. which bring on rigours, cold clammy sweats, syncope, and ultimately premature death.

The means, therefore, which nature points out for the cure of this species of debility are directed to support and increase the action of the blood through the heart and arterics; and the remedies to be employed are tonics and stimulants. Of all the stimulants which in this constitutional defect may be advantageously employed, *real* port-wine seems to be the most eligible. It has the advantage of being grateful to the palate and stomach, and of having its stimulant parts so much diluted, that it can be conveniently given at all times and seasons, and may be employed with sufficient caution; but it is of little service unless taken pretty largely.--- It may be suspected that wine has an operation analogous to that of opium; and on good grounds. But we can distinctly mark its stimulant power only; which renders its effects in the phrenetic delirium manifestly hurtful; in cases of debility, however, remarkably useful. Hence I directed the Solar Tincture to be taken morning, noon, and night, in strong doses, for the first month; once a day, or oftener, at the discretion of the patient, until the end of the third month, and my Cooling and Cleansing Powders twice a week; but to drink every day, after dinner, a pint of generous port; and to inform me at intervals of the change he might find in his constitution. He took with him a dozen large bottles of the Solar Tincture, and before a month elapsed, I had the pleasure of receiving an epistle of unfeigned thanks. He found himself so much restored by the course I laid him under, that, before the expiration of the three months, he married the lady; and I am happy to find that he has since had issue. I have been somewhat more elaborate in describing the particulars of this case, having reason to believe it is not an uncommon malady, and would therefore wish
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to enable every patient to become as much as possible a judge of his own infirmity.

NOCTURNAL EMISSIONS, OR INCONTINENCE
OF THE SEMEN.

A YOUNG man, of robust make, and in the prime of life, being under twenty-six years of age, applied to me for relief in the above unfortunate complaint. It appeared that, from the time of puberty, he had found a weakness in the part, and an occasional discharge of the semen, upon the slightest irritation. As he grew up to greater maturity, the malady increased upon him. Upon every attempt to have contact with a female, the semen passed involuntarily from him, before even a complete erection could take place, whereby his purpose was continually defeated. This defect grew upon him, until the bare sight or thought of any thing which tended to excite venereal desires brought away the semen; yet it had no affinity whatever to a gleet, because the emission never occurred but either in the attempt, or in the desire, of copulation; or under the influence of lascivious dreams. In proportion as this weakness grew upon him, his desire of familiarity with the sex became the stronger; and, I am inclined to think, was the principal reason of the increase of the malady, and of the nocturnal emissions, which happened more or less every time he went to sleep. This incessant discharge had reduced him to a meagre visage, fallow complexion, hollow eyes, depression of spirits, and slow fever; and a violent *tubes* would soon have followed. I directed the Solar Tincture every morning at sun-rising, at mid-day, and at six o'clock in the afternoon, in the quantity of a wine-glass full, with one-third of cold water; and every night at going to bed, twenty drops of liquid laudanum, for the purpose of making his sleep too strong to be affected by the influence of dreams. This course,

assisted by a strengthening regimen of calf's-foot-jelly, veal-broth, and strong port-wine negus, had very quickly the desired effect. His sleep was perfectly sound and calm, and, after the third night, he could not recollect the return of any nocturnal emission. The strengthening ointment, directed in page 240 of my Family Physician, was used every other morning; and, within the space of only two months, the feminal vessels were completely braced up, and the disorder so totally removed, as not to leave a single symptom of his former weakness.

ONANISM.

A YOUTH, apparently under age, applied to me for the cure of a disorder, which, he said, had deprived him of the power of erection, and of all sensation in the privities. In so young a subject, I could not suppose this want of tone arose from a general debility of the nervous system, particularly as no other symptoms warranted such a conclusion. I had a strong suspicion it was the effect of Onanism, or secret venery, which usually ends in this species of absolute impotency; but this he denied. He told me he had some time ago contracted the foul distemper, and through shame, and the dread of its coming to the knowledge of his parents, he had neglected to disclose his misfortune to any person, until the present malady was brought on. Of the foul distemper, however, I could find no other symptom than a simple gleet; and, upon putting the necessary questions, not a single reply corresponded with the usual effects of that disorder. After half an hour's close examination, I brought him to confess what I above suspected, that he had so much addicted himself to this shameful and destructive vice, that the feminal vessels were completely relaxed; the erectories, the nerves, and glans of the penis, had entirely lost their tone; an involuntary discharge of the semen, without irritation,

tation or turgidity of the parts, had long taken place, and brought on a want of appetite, an impoverished state of the blood, and an universal lassitude of the body. The lecture I gave him upon this occasion, will never, I trust, be effaced from his memory; and he has since faithfully promised that it shall not. I directed the strengthening electary and ointment, in page 239 and 240 of my Family Physician, to be used as therein prescribed; then to take, four times a day, a table-spoonful of the Solar Tincture in an equal quantity of warm water, for a month at least; then three times a day for the second month, and twice a day, in cold spring-water, for the two months following; which gradually coiled up the debilitated parts, gave elasticity to the blood, retrieved the sensation of the glans, and the sympathetic office of the erectories, braced the nerves, ligaments, and tendons, and gave that due tone and energy to the muscular system, which, in less than four months, restored the patient to perfect health and vigour.

AN IMPURE OR TAINTED HABIT.

THIS malady, so common among our dissipated youth, generally arises from a venereal complaint badly cured. Indeed the scrofula, the king's evil, the leprosy, and other foul humours, when too long suffered to prey upon the blood, will naturally induce this consequence; yet ninety-nine cases out of every hundred are found to result from the improper use of mercury, either taken too abundantly into the stomach, or too often applied externally, in the venereal disease. A gentleman in the militia very lately came to me under this misfortune, who had absolutely worn down the organs of his stomach by taking medicines for its cure, without obtaining the smallest relief. He was no sooner warm in bed, than deep-seated nocturnal pains attacked his arms, shins, and head, which many of the faculty

faculty mistook for rheumatism. The membranes, muscles, and ligaments of the joints, were scarcely ever free from pain; whilst carious ulcers occasionally broke out upon the ulna, tibia, and bones of the cranium. These symptoms had also deceived several of the faculty, who, taking his complaint to be a confirmed lues, still added to the malady, by loading him with fresh doses of mercury. The truth is, that this disorder was by no means of a venereal nature, but was rather the consequence of the remedy than of the disease, since it arose entirely from the long and repeated doses of mercury his body had sustained, and which was grounded in his habit by salivation. The mercury had insinuated itself into the marrow of his bones, had vitiated every fluid secretion, and tainted the very air he breathed. Under such circumstances, I will allow it is very difficult, if not almost impossible, for a physician, upon a superficial inspection, absolutely to decide whether the original disease hath been altogether overcome; yet surely he ought attentively to distinguish and consider the several symptoms apart; and then, by comparing them with each other, a clear judgment may be formed upon the general retrospect. Finding, by this method, the real state of the patient's case, I ordered him a nourishing diet, gentle exercise, and an absolute denial of the least intercourse with women. To this he regularly submitted, putting himself under a regular course of the Solar Tincture, which he took, three times a day, in the quantity of a wine-glass three parts full, filled up with cold water, for the first month. At the expiration of this time he paid me a visit, when his company was infinitely *more agreeable*, because the pleasing aspect of health had superseded the nauseous effluvia of his disease. I now only enjoined him to follow the same regimen and *abstemious* mode of living for a month, or two longer, taking

taking the Tincture, diluted in a glass of cold spring-water, once or twice a day, as he might find himself inclined. This he rigidly attended to; and I have now the pleasure to declare, that only nine large bottles of the Solar Tincture have restored this gentleman from the most dangerous and deplorable state of a tainted and corrupted habit, to sound health, and a renovated state of the blood and juices.

A TAINTED HABIT IN A STATE OF PREGNANCY.

THIS is the most shocking case my practice or experience ever produced. The patient was taken in labour, and in the act of parturition the child presented its right arm, which separated from the body while the operator was returning it into the uterus. The life of the mother being despaired of, I was sent for; when, on inspection, I quickly perceived conception had taken place under an infected state of one of the parents. I performed the residue of the operation myself, and brought away the foetus without a farther separation of the joints, but with great difficulty, since it was ulcerated, and half rotten with disease. By a most tender and judicious treatment of the woman, assisted by the Lunar Tincture, her life was preserved; and in the space of five weeks she appeared to have regained her health and strength; when, to the astonishment of every one, she fell into a violent salivation. Being sent for upon this singular occasion, I thought it right to interrogate the husband; when, after a vast deal of hesitation and dissembling, he confessed having had connection with his wife under a venereal infection; and with a view to prevent the consequences, he had prevailed on her to swallow strong doses of mercury, which I have reason to suppose lay dormant in the body until after her delivery; when the efforts of nature being no longer directed to the preservation
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of the child, suffered the mercury to attack the salival glans, and to produce the effect we have just described. I ordered her a spare but nourishing diet; worked off the mercury in the customary way, and then began a course of the Solar Tincture. A table-spoonful in an equal quantity of warm water, was taken four times a day for the first week; then three times a day until the end of the month; afterwards twice a day, or every other day, as the patient found convenient; by this means she happily experienced a complete cure, in less than three months, and now enjoys a perfect state of health, desirous of certifying the fact to any unfortunate female, who, under similar circumstances wishes to call upon me for that purpose. Indeed every woman who has the misfortune to suspect even the smallest taint of a similar nature to be lurking in her blood, should put herself under a course of the Solar Tincture, and persist in it, night and morning, in the quantity of a table-spoonful in a wine-glass of cold spring-water, during the whole nine months state of pregnancy.

The above case reminds me of having read in a monthly magazine, a very singular instance of an accidental salivation, brought upon a young lady by a foreign substance irritating one of the parotid glans; the particulars of which I shall here insert for the sake of those who may happen to be under similar circumstances. In the month of April, 1751, a young lady, about the age of sixteen years, of a delicate habit, but subject to no particular complaints, perceived the beginning of a disease, which afterwards proved most obstinate and loathsome, viz. an incessant spitting. The quantity of this discharge varied at different times, from one pint to two pints and a half in twenty-four hours. As to its quality, it seemed to be no other than the ordinary secretion of the salival glans.

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By so large and constant an evacuation, her strength became extremely impaired, and the most efficacious medicines had proved useless. She had taken large quantities of the Peruvian bark, both alone and combined with preparations of iron; and afterwards the fœtid gums, opium, amber, alum, and the Neville Holt-water, had in succession been given her. In the mean time an exact regimen had been prescribed: she had been ordered to ride constantly; and to confine herself to a mucilaginous diet, such as veal, calves' feet, &c. Likewise a gently opening medicine had now and then been interposed: nevertheless the disease still continued. She had afterwards tried the *tinctura Saturina*; and had, at the same time, been encouraged to chew the Peruvian bark, and to swallow the saliva. But all these attempts were vain; and after she had taken some or other of the medicines above mentioned, until the end of September, 1753, namely, above two years, it appeared to her physician, Sir George Baker, unreasonable to expect relief in such a case from any internal medicines whatever. He now conceived a suspicion, that some extraneous body, having accidentally found its way into the *meatus auditorius*, might possibly be the cause of this extraordinary secretion, by keeping up a continued irritation in the parotid glands. With this view he examined her ears, and extracted from them a quantity of fœtid wool. How, or when, it came thither, no account could be given. To this substance he attributed the beginning of the salivation, notwithstanding that the disease did not immediately abate on the removal of the wool; as it appeared to be no improbable supposition that the discharge might be continued by the force of habit, though the original cause no longer remained. It seemed therefore expedient to introduce some other habit, in the place of the increased secretion of saliva;

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which

which habit might afterwards be gradually left off. With this intention, he prevailed on the patient to chew perpetually a little dry bread, and to swallow it with her spittle. In a few weeks it became necessary for her to chew the bread only at certain hours in the day; and thus, after two months, she became entirely free from a most disgusting and tedious disorder. It is worthy of observation, that, at first, the swallowing of so much saliva frequently occasioned a nausea; and that then, for a few hours, she was obliged to spit it out as usual; and that, during the greatest part of the time when she chewed the bread, she had a stool or two every day more than common.

TABES DORSALIS, OR CONSUMPTION OF THE
BACK.

A YOUNG gentleman, twenty-two years of age, applied to me in the above disorder, which had worn him down to a mere skeleton. The tabes is seldom distinguished by any remarkable fever, cough, or difficulty of breathing; but is attended with want of appetite, a weak digestion, and a morbid state of the blood, whence the body grows languid, and wastes by degrees. Sometimes this species of consumption is brought on by a venereal ulcer; but it most commonly proceeds from excessive evacuations of the semen, which was the case with this patient. He had too early addicted himself to an intercourse with lewd women, that eventually brought on an involuntary shedding of the semen, which came from him on the least exertion, whether of walking, riding, lifting a weight, or even of pulling off his clothes. I ordered him a strong nutritious diet, with a table-spoonful of the Solar Tincture four times a day, in the same quantity of warm water, which he pursued for a month. He found his strength so much recovered, that I could safely advise moderate exercise,

exercise, both on horseback and on foot. The gleet, however, was uncommonly obstinate; and the Tincture was continued for the second month in the same quantity. By this time the parts were considerably braced; he could run or jump without perceiving the smallest emission, and the healthful colour of his cheeks began to return. He now persisted in the Tincture only three times a day, for a month longer; after which the dose was reduced to night and morning for another month; he then took it twice a day for three months more, at the end of which period every symptom of the complaint was removed, he had fully recovered his flesh and strength, and now preserves it by taking the Solar Tincture as a beverage, made after the manner of brandy-and-water. This disorder has in general been deemed incurable. It is true, that, even in its early attacks, it is so essentially necessary to abstain from venereal embraces, that without it the best remedies will prove altogether useless; hence the *Tabes Dorsalis* so often proves mortal, because the patient has seldom resolution enough to dispense with his amours.

RHEUMATIC GOUT.

THIS disease is generally brought on by alternate heats and colds in the blood, whereby a humour is produced which attacks the joints and muscles, sometimes accompanied with discolourations and swellings, and at other times without either; but it is always attended with excruciating pain. Mr. John Brandham, of Bridlington Quay, was attacked in this manner; when, after some time, the severe pain of his joints falling into his legs and thighs, deprived him of the use of his limbs, and confined him entirely to his bed. He was soon seized with a violent pain in his head and stomach, which so much affected his respiration, that instant

death was expected. In this extremity, half a wine-glass of the Solar Tincture was administered, *undiluted*, which removed the danger, and gave his stomach immediate ease. A table-spoonful, in the same quantity of warm water, was then given every third hour, during the succeeding day and night, by which the pains were considerably abated. He continued the medicine four times a day for a month longer; at the expiration of which time he experienced a perfect cure, and has never since found the smallest return of his complaint; of which he is desirous to satisfy any enquirer, who chooses to apply for that purpose.

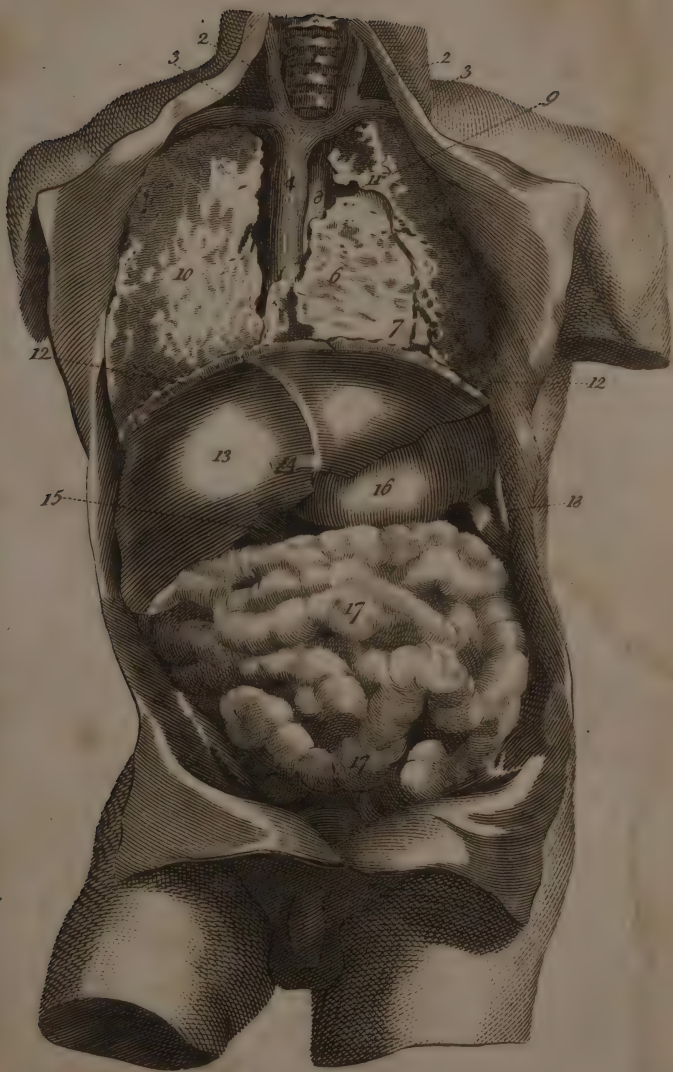
AGUES, CONVULSIONS, CHOLIC, BLOODY-FLUX,
AND VIOLENT SPASMS IN THE STOMACH AND
BOWELS.

DURING the fit, let one or two table-spoonfuls of the Solar Tincture, *undiluted*, be administered successively, as the extremity of the case may require; and afterwards let the patient continue the medicine, night and morning, in the quantity of a table-spoonful, in a wine-glass of warm water, or oftener, as the obstinacy of the case may render necessary, and in a very short time a perfect cure will be experienced; a few instances of which I shall add, in the words of those who have transmitted me the facts:

To E. SIBLY, M.D.

SIR,

A FEW nights ago, I was attacked in bed with a violent pain in my stomach and bowels, which alternately produced such a succession of convulsive spasms and cold chills, that I really thought I was seized for death. Fortunately, a bottle of your Solar Tincture was in the house, purchased the day before by my son, of which my servant gave me a table-spoonful and a half, unmixed with water.



A View of the Situation of the Thoracic and Abdominal Viscera, the Omentum being Removed.

water. The instant effect it had on my stomach I could only compare to electricity; for, to the astonishment of all about me, the spasms instantly ceased, a gentle perspiration came on, in which state I fell asleep, and did not awake till the morning, when I found myself entirely free from pain. On getting up, I took a spoonful more of the Tincture, in an equal quantity of warm water, and have not since experienced the smallest return of the disorder. Requesting you will make this known, for the benefit of others, I remain, with grateful esteem, &c.

M. ARMSTRONG.

No. 25, *Philpot-lane, Fenchurch-street,*
Feb. 12, 1794.

To E. SIBLY, M.D.

SIR,

IN gratitude, I cannot but thank you for that excellent medicine, the Solar Tincture. It has saved my life. I was suddenly seized with a violent cholic, which brought on a mortification of the bowels. The efforts of the faculty were tried in vain, and I was given over. In these moments of extremity, my existence was preserved by only two spoonfuls of your medicine, *undiluted*, which instantly relieved me from the rack of torture. After two more doses, the obstruction was removed by natural evacuation, and a few hours restored me to my usual state of good health. I entreat you to publish this for the public good, and shall be ever gratefully yours,

JOHN POWELL.

Clifton, near Bristol.

To E. SIBLY, M.D.

SIR,

ACTUATED by a principle of gratitude, I cannot omit acquainting you of an extraordinary cure performed on me by means of your Solar Tincture.

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I had for some time been afflicted with the dysentery, or bloody-flux, and was reduced to a very weak and languid state, without deriving any benefit from the prescriptions of the faculty. This induced me to make trial of your Solar Tincture; when, after taking only two small bottles, I found myself perfectly recovered; therefore, by publishing this to the world, you will confer a favour on your grateful, &c.

WILLIAM JACKSON.

No. 8, Windmill-street, Tottenham-court-road.

DISEASES OF THE BREAST AND LUNGS, ASTHMA,
DROPSY, OR CONSUMPTION.

TAKE one spoonful of the Tincture, night and morning, for twenty days successively, diluted in two spoonfuls of cold spring-water; then reduce it to the same dose every other day, which will in general remove the malady in the course of a month; but if the dropsy or consumption has been far advanced, it will be necessary to continue the medicine for one, two, or even three months longer, reducing the number of doses in proportion as health and strength appear to return, and as the blood shall have resumed its proper consistency by a brisker circulation. In these complaints, it will not be amiss to take the Tincture in a tumbler of warm water, as a beverage, for some time after the cure is perfected, as it will infallibly prevent the blood from returning to its watery and impoverished state, and will rarefy and expel the viscid cohesions in the pulmonary vessels. In these disorders, the Solar Tincture may be safely administered to females even during obstructions of the catamenia, as hath lately been experienced, by perfecting an admirable cure on a lady in Grafton-street, Fitzroy-square.

This lady was afflicted with obstructions of the liver and spleen, insomuch that she could not walk
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up one pair of stairs, without much pain and shortness of breath. Her menses were obstructed; and twice or thrice a day she was attacked with asthmatic spasms, accompanied with febrile symptoms. This affliction being of a peculiar nature, I was obliged to prescribe both the Solar and Lunar Tinctures, in the following manner: Whenever the fever came on, she took a dose of the Solar Tincture; and, every morning and evening, sixty drops of the Lunar Tincture, in a gill of mugwort-tea; in twenty-one days she was perfectly recovered, and restored to her usual colour and vivacity, to the great joy of her parents and friends.

MENTAL DEPRESSION, OR LOWNESS OF SPIRITS.

THIS may be considered the primary disorder of the nervous train; and, if resisted in time, may in most cases be easily cured. For this purpose take a table-spoonful of the Solar Tincture, diluted in a wine-glass of cold spring-water, every forenoon at eleven or twelve o'clock, for fourteen successive days; then use it every two or three days for a month, and the complaint will be entirely removed, as all patients will sensibly feel, by their alertness, activity, and unusual flow of natural spirits; of which the following case may serve as an example:

To E. SIBLY, M.D.

SIR,

FROM a full conviction of the efficacy of your Solar Tincture, I cheerfully come forward to inform you, that having been much afflicted with depression of spirits, a nervous tremour, and palpitation of the heart (owing, I believe, to close application to study, and much professional duty) I have lately experienced a perfect cure, by taking one large bottle of your medicine. Impressed, therefore, with a sense of gratitude to God and you,

you, and having a certain knowledge of many other cures performed by your Tincture, I do hereby request this may be made public, for the benefit of the afflicted, and am, with esteem, &c.

W. WOOLLEY.

Borough, Southwark,
May 10, 1794.

BILE ON THE STOMACH.

ALL bilious complaints are removed by the Solar Tincture, in a most extraordinary manner. Whenever a fit appears to be coming on, with the stomach loaded and oppressed, one large table-spoonful, taken in the same quantity of warm water, will, in ten minutes, carry off the offending matter, cleanse and comfort the digestive organs, and give the patient immediate relief.

BITE OF A MAD DOG, OR ANY VENOMOUS REPTILE.

THE fatal disease consequent on the bite of a mad dog, is denominated hydrophobia, or *dread of water*; which circumstance first suggested dipping in the sea for the cure, by antipathy. It is very remarkable, that these patients have not only a dread of water, but of every thing bright or transparent. Soon after this affection takes place, the mind becomes impaired; which shews that the poison is carried through the blood to the nervous fluid, and thence to the brain. Dr. James, in his Treatise on Canine Madness, mentions a boy sent out to fill two bottles with water, who was so terrified by the noise of the liquid running into them, that he fled into the house, crying out that he was bewitched. He mentions also the case of a farmer, who, going to draw some ale from a cask, was terrified to such a degree at its running into the vessel, that he ran out in great haste with the spigot. But, in whatever manner this symptom comes on,

on, it is certain that the most painful sensations accompany every attempt to swallow liquids. Nay, the bare sight of water, of a looking-glass, or any thing clear or pellucid, will give the utmost uneasiness, and even throw the patient into convulsions. In this disease there seems to be an extreme sensibility and irritability of the nervous system. The eyes cannot bear the light, or the sight of any thing white; the least touch or motion offends them, and they want to be kept as quiet and in as dark a place as possible. Some complain of the coldness of the air, frequently when it is really warm. Others complain of violent heat, and have a great desire for cold air, which yet never fails to increase the symptoms. In all there is a great flow of the saliva in the mouth, which is exceedingly troublesome to the patients, as it has the same effect upon their fauces that other liquids have. This, therefore, they perpetually blow off with violence, which in a patient of Dr. Fothergill's occasioned a noise not unlike the hollow barking of a dog, and which he conjectures might have given rise to the common notion that hydrophobious patients bark like dogs. They have an insatiate thirst; but are unable to get down any drink, except with the utmost difficulty; though sometimes they can swallow bread soaked in liquids, slices of oranges, or other fruits. There is a pain under the *scrobiculus cordis*, as in the tetanus; and the patients mournfully point to that place as the seat of the disease. Dr. Vaughan is of opinion that it is this pain, rather than any difficulty in swallowing, which distresses the patient on every attempt to drink. The voice is commonly plaintive and mournful; but Dr. Vaughan tells us there is a mixture of fierceness and timidity in the countenance which he cannot describe, but by which he could know a hydrophobious person without asking any questions. Some seem to have

at times a furious delirium, and an inclination to spit at or bite the by-standers; while others shew no such inclination, but will even suffer people to wipe the inside of their mouths with the corner of a handkerchief, in order to clear away the viscid saliva, which is ready to suffocate them. In some male patients there is an involuntary erection of the penis, and emission of the semen; and the urine is forced away by the frequent return of the spasms.

In a letter from Dr. Wolf, of Warsaw, to Henry Baker, Esq. F.R.S. dated Warsaw, September 26, 1767, we have the following melancholy account of the cases of five persons who died of the hydrophobia:---None of them quite lost their senses; but they were all talking without intermission, praying, lamenting, despairing, cursing, fighting, spitting a frothy saliva, screeching, sometimes belching, and retching, but rarely vomiting. Every member is convulsed by fits, but most violently from the navel up to the breast and œsophagus. The fit comes on every quarter of an hour; the fauces are not red, nor the tongue dry. The pulse is not at all feverish; and when the fit is over nearly like a sound pulse. The face grows pale, then brown, and during the fit almost black; the lips livid; the head is drowsy; and the ears tingling; the urine limpid. At last they grow weary; the fits are less violent, and cease towards the end; the pulse becomes weak, intermittent, and not very quick; they sweat, and at last the whole body becomes cold. They compose themselves quietly, as if to get sleep, and so they expire. A general observation was, that the lint and dressings of the wounds, even when dry, were always black, and that when the pus was very good in colour and appearance. In one of Dr. Wolf's patients who recovered, the blood stank intolerably as it was drawn from a vein; and one of Dr. Vaughan's patients complained

complained of an intolerable foetid smell proceeding from the wounded part, though nobody but himself could perceive it. In general, the violent convulsions cease a short time before death; and even the hydrophobia goes off, so that the patients can drink freely. But this does not always happen; for Dr. Vaughan mentions the case of a patient, in whom, "when he had in appearance ceased to breathe, the spasmus cynicus was observable, with an odd convulsive motion in the muscles of the face; and the strange contrariety which took place in the action of these, produced the most horrid assemblage of features that can possibly be conceived. Of this patient also it was remarkable, that in the last hours of his life he ceased to call for drink, which had been his constant request, but was repeatedly asking for something to eat."

The hydrophobia seems to be a symptom peculiar to the human race; for the mad animals which communicate the infection do not seem to have any dread of water. Notwithstanding this, dipping is the common remedy for the cure of dogs and men. With regard to the symptoms of madness in dogs, they are very equivocal; and those particularly enumerated by some authors, are only such as might be expected in dogs much heated or agitated by being violently pursued and struck. One symptom indeed, if it could be depended upon, would determine the matter; namely, that all other dogs avoid and run away from one that is mad; and even large dogs will not attack one of the smallest size who is infected with this disease. Upon this supposition they point out a method of discovering whether a dog that hath been killed was really mad or not; namely, by rubbing a piece of meat along the inside of his mouth, and then offering it to a sound dog. If the latter eats it, it is a sign the dog was not mad; but if he rejects it, with a kind of howling noise, it is certain that he was.

Dr. James tells us, that among dogs the disease is infectious by staying in the same place; and that after a kennel has been once infected, the dogs put into it will be for a considerable time afterwards in danger of going mad also. A remedy for this, he says, is to keep geese for some time in the kennel. He rejects, as false, the opinion that dogs when going mad will not bark; though he owns that there is a very considerable change in their bark, which becomes hoarse and hollow.

With regard to the immediate cause among mankind, there is not the least doubt that the hydrophobia is occasioned by the saliva of the mad animal being mixed with the blood. It does not appear that this can operate through the cuticula; but, when that is rubbed off, the smallest quantity is sufficient to communicate the disease, and a slight scratch with the teeth of a mad animal has been found as pernicious as a large wound. It is certain also, that the infection has been communicated by the bites of dogs, cats, wolves, foxes, weasels, swine, and even cocks and hens, when in a state of madness. But it does not appear that the distemper is communicable from one hydrophobic person to another, by means of the bite, or any other way. It has been generally allowed by practitioners, that though the hydrophobia may be prevented, yet it seldom can be cured after it has made its appearance. The most essential part of the treatment, therefore, depends on an immediate use of the proper means of prevention. For this purpose some advise the instant cutting out the part bitten, which must certainly be an effectual mode, provided we could be sure the poison had not reached beyond the wound. When, however, we consider the rapidity with which the blood and juices flow, it seems impossible that such an operation can be wholly depended on. I should nevertheless advise it to be done, if the part bitten be much mangled; after which let it be well
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foked with the Solar Tincture; and, to fortify the blood, let the patient swallow a table-spoonful every three hours, *undiluted*, for the first day; and the same dose night and morning for a month following; taking my Cleansing Powders twice a week. Let the part be again foked with the Tincture, four times a day, for three or four days; and I am satisfied a safe and perfect cure may be relied on. For the bite of adders, snakes, &c. bathing the part, and taking the medicine *undiluted*, will counteract the virulence of the poison, and preserve the patient from further injury.

C A S E.

To E. SIBLY, M.D.

SIR,

THINKING it a duty due to you, to acknowledge benefits received through your means, and desirous that society should partake of similar benefits, I take the liberty to communicate the following circumstance:

My brother, Benjamin, about eight years of age, was bit by a dog, in the leg; and from the condition of the animal, it was supposed to be mad. My parents, much alarmed and distressed, sent my brother to Mr. Chamberlain, the druggist, who lives in the same street; he applied the Solar Tincture to the wound, repeatedly well bathing the part, and he has been quite well ever since. The dog that bit my brother, bit another boy in the hand immediately after: the parents of the boy applied to medical men, of the greatest reputation in this town, who ordered sea-bathing; but this was of no use to him, for he died in less than two months, raving mad.

I am happy to say, that although it is nearly two years since the accident happened to my brother,

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the slightest symptom of the hydrophobia has not appeared. In justice, therefore, to you, and for the benefit of society at large, you may make what use you please of this letter; and any person applying to me, may be certified of the truth from my own hands. For the present, Sir, I subscribe myself, your's, in perfect esteem,

JAMES BUDD, Jun.

No. 14, *Butcher-street, Portsea-town.*

July 23, 1798.

FOR GUN-SHOT WOUNDS, CUTS, STABS, &c.

GENTLEMEN in the army and navy, and all persons liable to gun-shots, stabs, wounds, &c. should never be without the Solar Tincture. Its salutary effects on the blood, in all these cases, are really surprising. It totally prevents, and will even stop, mortification, in very advanced stages. It quickly supplies the greatest loss of blood, fortifies the heart, cherishes the vital organs, and heals and unites the flesh in an uncommon degree. If taken internally, and poured at the same time into the wound, it is quickly propelled through the heart, by the veins and arteries, and thus renovates the exhausted spirits, and preserves life. Its effects on a few simple wounds may be seen in the following cases:

To E. SIBLY, M.D.

SIR,

FOR the sake of those who are liable to accidents, I think it right to inform you of a most remarkable cure performed by your Solar Tincture, on a very deep and dangerous wound made on Mrs. Cook, by a case-knife, of more than the depth of my fore-finger. After trying every means in vain to stop the blood, I sent for a bottle of your Solar Tincture, and well bathed the wound therewith. The blood and Tincture readily

dily assimilated, and formed a crust on the orifice of the wound, which very soon stopped the effusion of blood. But what is most remarkable, the wound was completely healed in less than six days, and is now so perfectly closed, as to be almost imperceptible. You are welcome to publish this, and in so doing you will oblige, &c.

WM. COOK.

No. 1, Edward-street, Portman-square.

To E. SIBLY, M.D.

SIR,

In justice to my own feelings, I cannot but acquaint you with a cure performed by your Solar Tincture, in a very uncommon manner. As I was travelling, in the stage, to Boxley-abbey, near Maidstone, in Kent, a gentleman who sat next me, putting his head out of the window, received a violent cut across the eye, from the coachman's whip, which produced an immediate swelling and inflammation, attended with so much agony, that he declared the pain was insupportable. I had purchased a bottle of your Solar Tincture, while in town, knowing it had performed many surprising cures in my neighbourhood. This I immediately opened, and applied to the inflamed part; and after washing the eye well with it, I bound a white handkerchief tight over it, wetted with the Tincture. In less than ten minutes the anguish was greatly assuaged; and in the course of three hours it was quite well. The gentleman expressed the utmost astonishment at the celerity of the cure, as did every passenger in the coach. I wish this to be made as public as possible, for the benefit of those who are liable to accidents; and am, with respect, &c.

M. STABLES.

Kensington-place, Bath.

To

To E. SIBLY, M.D.

DEAR SIR,

BEING informed by a friend that you shortly intend to print a new edition of your Medical Mirror, Mrs. M. thinks it a duty she owes to the efficacy of your invaluable Solar Tincture, to beg leave that her case may be made known through the medium of that publication; so that those afflicted with similar complaints may know what medicine to apply, and obtain relief. I make no doubt but you have already many cases not less lamentable than her's; yet her earnest solicitations, and the impulse of the gratitude I feel on the recovery of so valuable a life, urges me to solicit this favour. Your compliance will confer an additional obligation on, Sir,

Your obedient humble servant,

WILLOUGHBY MARSDEN.

No. 13, Down-street, Piccadilly,
10th February, 1795.

C A S E.

The origin of Mrs. Marsden's extraordinary case, proceeded from the injudicious treatment of a dignified physician*, who attended her for a *spurious pleuretic complaint*. This physician ordered phlebotomy to such an extravagant degree, that in a few days there were taken from her *ten pounds of blood!* Added to this, a regimen of low diet was ordered, consisting of barley-water, panada, balm-tea, oranges, lemons, &c. without any licence to derive the least sustenance from meats, or any similar nourishment. Nature being thus unsupported, and having already received so inhuman a shock by immoderate venesection, her natural juices were so destroyed, that the absorbent

* Sir R. J. Bart.

property relaxed its functions, the solids were impoverished, and the whole nervous and organic systems forbore to perform their office; this naturally introduced a leucophlegmatia, or visceral dropsy, attended by a weak and unequal pulse, immoderate watching, a great lassitude throughout the whole frame, accompanied with a copious discharge of the menstrual flux, and a total imbecility of the whole seminal vessels; icterus, or yellow jaundice, was now produced, certainly brought on by such a profusion of acids.

In this state a number of other respectable gentlemen of the faculty were applied to, but in vain; for after they had gone through the common rotation of medicine, she grew worse, and it was reasonably imagined the period of her existence was near; but providentially, in this deplorable state, she was informed of the wonderful power of the Re-animating Solar Tincture in such cases; as the last resort, therefore, it was thought proper to consult me. I enquired into the various symptoms of her complicated maladies, and prescribed a table-spoonful of the Solar Tincture every six hours, with an equal quantity of water; but after taking two bottles, this injured sufferer finding she received much more benefit when she took the Tincture *undiluted*, she determined to try the next bottle without any aqueous menstruum whatsoever, and from this bottle received such amazing benefit *, that she resolved in the future to make use of the Tincture intire; this she continued to do, and by an external as well as by an internal application, she was, after taking twelve large bottles, perfectly recovered, to the astonishment of her friends, and no small joy of her family.

* In this case, *it was not the water* mixed with the Tincture that could afford her the least relief: she had too much of that menstruum already in her composition.

C A S E.

Mr. CAREY, caulker, residing in Unicorn-street, Portsea, Hants, was afflicted by dreadful epileptic fits, which were always preceded by vertigo, a pallid countenance, a difficulty of respiration, and the abdomen tumid with flatulencies to an amazing degree; and when seized, violently agitated by trembling and foaming at the mouth, as well as a total deprivation of the sensitive faculties. These fits returned upon the patient, at stated periods, every three or four months, for many years, and confined him to his room from three to seven weeks at a time. Upon asking medical advice, all the hopes he could gain from the faculty was, *that his was a case beyond the help of medicine.* A friend, however, who went for the purpose of sitting up with him during his extreme malady, one night as one of the fits had just seized upon him, having some of the Solar Tincture by him, resolved to try its efficacy, and having given him two table-spoonfuls in the course of an hour, the epilepsy vanished, nor has he been attacked with the least symptom since the year 1793, though previously to that period he was never free from the most violent attacks of the disorder.

C A S E.

Mrs. STOCKMAN, Queen-street, Portsea, by want of prudent management during her lying-in, caught a violent cold, which settling upon her lungs, the viscera was affected, and caused a total relaxation of all the seminal vessels, which so much debilitated the whole frame, that the solids were in the most impoverished state; she was advancing very fast towards the last stage of a consumption; medical assistance seemed to be baffled, and hope was

was rendered vain; when by taking only three bottles of the Solar Tincture, she was perfectly recovered, and is now likely to be the happy mother of a numerous issue.

C A S E.

Mr. BROWN, rope-maker, Charlotte-row, Portsea, was tormented by a violent cough, which unhappily terminated in an epyema, or consumption. He was so reduced and emaciated, that no hopes of his recovery were entertained, as he had been compelled to give over his employment for eight months. After resorting to all the common routine of medical assistance, the Solar Tincture was recommended to his consideration. He gave it a trial, and its wonderful effects soon proved how well he had acted; for by taking only one bottle, his stomach was braced, he expectorated freely, his countenance began to recover its wonted appearance, his fæces were regular, and the hectic fever left him; his respiration became easy, and his pulse regular; and to the utter astonishment of himself and his whole family, two more large bottles perfectly restored him to ease and comfort, and invigorated the whole system, so that he is now a living monument of the salutary effects of this admirable Tincture.

C A S E.

A MARINER, belonging to the brig Hannah, Joseph Hopkins, master, bound to Maryland, in America, was troubled with an inflammation of the bowels, accompanied by a fever, and intense heat, thirst, and nausea. In this case one bottle of the Solar Tincture established a cure.

C A S E.

Mrs. DUBOIS, a widow lady, at No. 5, Portland-street, Soho, of the age of eighty-five years,

in the month of January, 1794, was afflicted with a peripneumony of the lungs, attended with a pain between the scapulæ, a violent cough, a weight and distension of the præcordia, a loathing of food, an intermitting pulse, a frothy, but sometimes a yellow matter expectorated by coughing; and when she lay on her side, in danger of being suffocated; her extremities cold, and the nails of the fingers became livid, with little or no sleep. After making use of many medicines to no purpose, she heard of the re-animating property of the Solar Tincture, and I was applied to for my assistance. Although her extreme age was such, that little could be expected from common medicines, yet knowing the virtues of the Solar Tincture as the pabulum, or food, of life, I readily prescribed half a table-spoonful, diluted with an equal quantity of water, to be given every three hours; but to be augmented the second day to a table-spoonful. This produced the desired effect, and brought on a profuse expectoration, and dispelled the uneasiness of her respiration; her urine was discharged more copiously, and with much sediment; her fæces were moderately lax, her appetite consequently returned, and I had the pleasure to find, after she had taken four bottles, that her vital heat increased, her spirits were invigorated, and the whole functions of her body restored to their usual strength.

She is now a living testimony of the astonishing powers of this singularly prolific medicine.

August 2, 1796.

CASE.

To E. SIBLY, M.D.

SIR,

TO continue silent, after the many extraordinary instances of success I have witnessed from your
truly

truly valuable Solar Tincture, would be the extreme of ingratitude; a conduct I would earnestly desire to avoid.

In my own family, Sir, I have occasionally used it for the last three years, and have derived infinite satisfaction from the success attendant upon my recommendation of it to others. In fits, and bowel complaints (particularly incident to children) I have, on administering the Tincture, found almost instant relief; nor is it less efficacious in the whooping-cough. I was induced to use it for this truly disagreeable malady, by your having, in your short treatise, described it as being a cleanser of the lungs, viscera, &c.

This reminds me of a very singular instance of success which occurred about two months ago: The child of one Thomas Deadman was sorely attacked by a violent cold, which terminated in an inflammation on its lungs; an apothecary, of great respectability, attended it, and to my knowledge gave up all hopes of saving the child's life. In the awful interval of extreme apprehension and slender hope, a tea-spoonful of Tincture, with as much water, was given her; this soon occasioned the child to open its eyes, which she had not done for two days preceding. Encouraged by this circumstance, I earnestly recommended a further supply, one tea-spoonful of Tincture to two of water, every two hours. In a very short time the danger was over; the child now lives in apparent health and strength. If the attestation of the parents will, in your opinion, tend to increase the knowledge of the Tincture's efficacy, they will most gratefully come forward, whenever you please.

As a styptic, it is invaluable; and in violent bruises and contusions, one trial only will be sufficient. Having been in no one instance disappointed, when properly administered, I already anticipate much pleasure in trying its *re-animating*
powers

powers on animals, agreeably to your hints in the Treatise. With the most earnest wishes for your success, I am, Sir, &c.

T. BENNET.

N.B. A medical friend of mine, in Essex, writes me word, that he has used the Tincture with much success in agues. As he has laid aside his former prejudices against it (by candidly trying its powers) I hope and expect that he will be of great service to the afflicted, by his recommendation.

in East-street, Kennington,

June 20, 1798.

C A S E.

A NOBLEMAN of very high rank, in this country, called in my assistance to the relief of his lady, who experienced the utmost degree of *lassitude* and *frequent abortion*. She was attacked with pains of the stomach in the morning, which, descending to the lower extremities, harassed her with intense pain and extreme languor; she was also troubled with flatulencies and depression of spirit, till about mid-day, when her constitution, naturally pure, resisted the complaints, and relieved her till about nine or ten o'clock in the evening, when her ladyship's malady returned with redoubled weariness; the water appeared pale, with a sediment; she was attacked by nervous head-aches, and violent spasms relaxed her whole frame; the fluor albus made an alarming appearance; her flesh lost its firmness; and although only in the TWENTY-FIRST year of her life, she unhappily experienced the sensation of the *infirmities of premature age*; her sleep approached torpidity, except interrupted sometimes by dreams; and although her appetite appeared regular, she had every symptom of hypochondriacal dejection. These alarming indications of decay so agitated his lordship's feelings, that the regular

regular practice, as well as a profusion of *glutinous nostrums* had been tried for upwards of a year, and had obstructed the capillary vessels without any visible relief; he applied to me, and earnestly desired my advice. Conceiving the lady's situation, though to appearance desperate, not beyond the reach of the *invigorating* power peculiar to the *re-animating* SOLAR TINCTURE, I prescribed the medicine to her ladyship; the first application of which produced the most extraordinary change for the better, and ultimately re-established her ladyship in all the blessings of good health and a confirmed temperature of body. It may not be unnecessary to add, that she has since cheered this noble house with a son and heir. To evince his lordship's good opinion of the properties of this *invaluable Tincture*, I shall beg to subjoin a copy of one of his lordship's last letters, as follows:

To Dr. SIBLY.

SIR,

INCLOSED is a draft for the amount of two dozen of Solar Tincture bottles, that you sent to Lady -----.

She desires that you will immediately send to her one dozen more; and that you would give particular orders that it may not be left at the coach-office, neglected, as one of the boxes were before.

She continues to go on well in her pregnancy, and is much better in health in general. She seldom has the head-ache now, and does not feel so cold as she used to do in a morning. Ever since she has taken some magnesia at night, the griping pains do not come on.

She takes your medicine regularly, in a morning early, or in the night, if she does not sleep well, which, in that last case, immediately brings on sleep.

sleep. She does not take any in the day-time, except she has a head-ache, or a pain in her back, and then it generally relieves her soon.

I am, Sir,

Your humble servant,

April 3, 1795.

C A S E.

SIR,

WITH heartfelt satisfaction I communicate to you the great benefit I have received from your invaluable Solar Tincture. It is about fourteen years since I was attacked with a violent head-ache, which increased upon me, notwithstanding the united efforts of several of the faculty. After various trials of medicines, and two years' suffering, a physician, eminent, and of great practice, recommended a perpetual blister on my back. This, Sir, threw the disorder from my head upon the system of the nerves, which lay near the heart; obstructions took place, which nothing I could take could remove, which brought on restless nights, attended with frightful dreams, and an universal relaxation of the nervous system, lowness of spirits returned frequently upon me, and sunk me to the very centre of the earth; I could at times feel every cold cloud that passed over me. Every spring, when the north and north-east winds were most prevalant, I was sure to catch a violent cold, which would confine me for some months; at which time the abdomen would swell excessively with a pent-up wind, which nothing I could take could discharge. Spasms in every part of the body were at this time prevalent, and very distressing. In due time, after much suffering by the use of medicines, it passed through me, and fell into my legs, bringing on the dropsey, which, with difficulty, I was enabled to repress; a languor of

of spirits, debilitated state of body, weakness in the loins, and the rheumatism in my head, afflicted me many years. At length, a gentleman of the faculty, in the country, whom I venerate and esteem, wrote me to send him a quantity of your Solar Tincture; against which I confess myself to have been greatly prejudiced, having so often been deceived by advertised medicines, even to my injury. In continuing my correspondence, I determined in myself to give it a trial, and am exceedingly happy that I have so done; for notwithstanding my discouragement in the beginning, I determined to persevere. On taking the two first bottles, I found my complaint exceedingly acute, the pain on the system of the nerves in the stomach increased, hysterics, and convulsions; in fact it is out of my power at present to convey an idea of the pain I suffered. Night and day I was on a continual rack; the third bottle removed it into my lungs. Phlegm in this state overwhelmed me, and a shortness of breath, nearly, at times, to suffocation. I persevered in the use, which removed it again into the brain. I now found great ease, and remarked, that wherever my complaint removed, the effect of the Tincture was visible in a particular warmth at that part. In some stages of my disorder, I have been awakened from my sleep with an uncommon cold fit; at which time it hath appeared as if all my veins were full of ice. I am happy to inform you, that all these complaints, with many others, not enumerated, are removed by your very excellent Tincture. I now feel a strength and freedom in my stomach, which I have been a stranger to for twenty years; and although in my sixty-fourth year, my strength is as great as it was at forty.

You are at liberty to make use of this information in what way you please. I shall always be ready to answer every enquirer whom you may

please to send, and I hope to their satisfaction. For myself, I must declare, I have found more real benefit from your Solar Tincture than from all the things I have ever taken.

I am, Sir, respectfully,

Your's, &c.

H. J. GOLDRING.

No. 2, Chequer-alley, Bunhill-row, Moorfields.

Aug. 4, 1796.

C A S E.

SIR,

AS an admirer of the improvements of medical philosophy, I am induced to send you the following case, as a singular proof of the efficacy of your Re-animating Solar Tincture, in contusions:--- Being alarmed by the shrieks of a child, in the street, I enquired the cause, and found that his fingers were bruised by the sudden jamming of the street-door, so violently, that they appeared one pressed pulp, with the blood forced out of every pore. I immediately applied the Tincture (as I keep it by me, being subject, at times, for some years, to internal piles*, and violent hæmorrhage, from a costive habit of body) and had the pleasure to find the excruciating pain instantly to abate, and instead of being black, resume their natural colour; and, after a few applications, his fingers were perfectly recovered. I must beg leave to make a few observations on the virtue of the Tincture, from its similar effects to vital air, in restoring suspended animation, and renovating the vital principle, in a languid state by disease, accidents, &c. The new discoveries in pneumatical chemistry have opened a field of knowledge which promises great improvements in the medical art, and accounts for many curious and useful

* See page 135.

phenomena in nature, which were before unknown. I could not but admire the effects of the Solar Tincture, in the above case, in preventing the bruised fingers turning black, as is the case in all bruises, and in every case where the circulation is prevented by suffocation, fits, &c.; the lips, nails, and blood, turning black for want of a supply of oxygen, or vital air*: the pain ceasing on the application of the Tincture, may be from similar effects, as by experiment we find that when the skin is removed by blisters, the common atmospheric air, being in contact, gives pain; but if the part is immersed in facitious air, the pain instantly ceases. From the repeated trials of your Tincture, in different cases, I find its renovating efficacy extended to admiration; and am, Sir, with respect, your's, &c.

W. JACKSON,

Professor of Medical Electricity.

No. 47, Upper Rathbone-place.

I SHALL only remark further, with respect to wounds, bruises, &c. that a short time ago, as a coach was driving furiously out of Cavendish-square, the horses unfortunately beat down a girl of eight years of age, the daughter of Mr. and Mrs. Larken, of Clipston-street, Fitzroy-square; and the wheels passing over her body, she was taken up to all appearance dead. The spectators were for carrying her immediately to the hospital; but the accident happening very near my house, I was sent for. I avoided letting blood, but bathed the bruised parts thoroughly with the Solar Tincture, and introduced half a spoonful, *undiluted*, into her stomach. It was now about nine o'clock at night. She was composed and asleep before ten, her present agony being subdued by the power of the medicine. A spoonful more of the

* See the Plate of the Heart, coloured.

Tincture was given her at different periods of the night, the sudorific efficacy of which brought on a plentiful perspiration. At ten o'clock the next morning she awoke, and got up, and was so well recovered as to be able to play about with her companions, in all respects the same as if nothing had happened. The girl and her parents are pleased with every opportunity of recounting the circumstances of this event to any enquirers.

C A S E.

To E. SIBLY, M.D.

SIR,

I SHOULD think it unpardonable in neglecting to inform you of the wonderful effect your *Re-animating Solar Tincture*, this last week, has had on a child not two years of age, troubled with convulsions from its birth, which had contracted the muscles of its arms and hands, and impaired its senses, so that it appeared a poor distorted idiot.

The infant, in this condition, was carried by its mother to many medical gentlemen, and, with the rest, to Mr. Barnard, of Southampton, who for several months tried a variety of means, without success. In this state it was brought to me; and after making use of many medicines (according to what is termed regular practice) like the rest of the faculty, met with nothing but disappointment, and while despairing of giving it any relief, bethought myself of the virtue and efficacy of your *Solar Tincture*, in many cases for which I had prescribed it. This recollection made me determine to make use of it, in this instance, and, to my astonishment, it exceeded my most sanguine expectations; for the child had not taken more than one large bottle, in a dose of two tea-spoonfuls, three times a day, or as often as the fit appeared approaching, but it perfectly recovered, with the use of its senses, hands, and

and arms, to the no small pleasure of myself, the mother's joy, and to the credit of your *Solar Tincture*. I am, Sir, respectfully your's,

JOSEPH CHAMBERLAIN,

Butcher-street, Portsea, Hants, Chemist and Druggist.
18th May, 1798.

To E. SIBLY, M.D.

SIR,

SUCH is the extraordinary demand for your *Solar Tincture*, that I wish to have sent me a fresh supply, by the first conveyance. Every week produces some fresh instance of its remarkable efficacy, in addition to that case sent you, a few days back, of an infant cured of convulsions, often so fatal to children. We have had two cases of agues; they were both very obstinate, having baffled every other remedy, but by taking one large dose of your *Solar Tincture*, they were quickly overcome; indeed the effect was so sudden on both of them, that it was astonishing, and I am inclined to believe, in such complaints, it is the greatest specific in the known world.

I am, &c.

J. CHAMBERLAIN,
Butcher-street, Portsea, Chemist and Druggist.
May 29, 1798.

THESE are only a few of the many thousand distressful cases which have been totally removed by means of the salutary interposition of the REANIMATING SOLAR TINCTURE, OR PABULUM* OF LIFE: and being desirous that every one afflicted may judge somewhat of their own complaint, I have added the following few remarks.

* Or Food.

OBSERVATIONS

OBSERVATIONS

HOW TO DISTINGUISH ONE DISEASE FROM
ANOTHER.

IT is a well-known fact that many a valuable life has been lost by a mistaken judgment; as such it renders it necessary the afflicted should be acquainted with a certain knowledge of their own complaint, especially as so many diseases are so nearly allied to each other: among this class is the

HÆMOPTYSIS, or spitting of blood; or **HÆMORRHAGE**, or flux of blood from the lungs. This should be carefully distinguished from bloody spittle which proceeds from the œsophagus, fauces, and nostrils, and is rather brought up by hawking than by coughing; besides, it is not so copious, it is mixed with phlegm, and is of an obscure bloody colour. Likewise, a true hæmoptysis may be known from that of spitting of blood, which proceeds in a smaller quantity, from a disorder of the vessels of the *aspera arteria*, and is brought up with coughing, and is commonly attended with itching, and a salt taste. An hæmoptysis differs greatly from vomiting of blood, because in the former the blood is thin, very florid, arterial, and not brought up without labour and straining; whereas in vomiting of blood, it is brought up without coughing; it is thick, coagulated, and black, and chiefly proceeds from the veins. Neither is vomiting of blood of one single species: one kind proceeds from a corroding caustic contained in the stomach, as in poisons, and violent emetics; another sort proceeds from an impetuous motion of the blood, brought from other parts of the vessels of the stomach, which are easily

easily burst, as is the case from the suppression of the usual sanguineous evacuations; this kind of vomiting generally observes some stated periods.

In the kinds of *bloody urine*, one proceeds from a rough stone lacerating the urethra, or its vessels, which is not very common even to nephritic persons, and then a small quantity of blood is voided. But if it is attended with a violent impetus of the blood, and flows violently to the kidneys, from other parts, it is generally without mixture, and without any particular complaint or sensation; and when it separates from the urine, is not red, but of a brownish yellow colour. A disorder not unlike this attacks persons advanced in years, who are full of blood and humours, but often without any danger.

The flux of blood which sometimes happens to pregnant women, without any danger to health, ought to be distinguished from that which threatens abortion. If it only happens periodically, for three or four months, then it is salutary; but if the flux be large, and proceeds from the vessels of the uterus, it is dangerous both to the mother and foetus. If the flux is violent, it shews a total separation of the secundines, and that abortion will follow; if it be moderate, the foetus may be saved. If this flux corresponds with the period of the catamenia, and the os uteri is closed and without pain, the flux does not proceed from thence.

Moreover, a flux of the piles, or hæmorrhoides, is to be well distinguished from a dysentery, since they both agree in this, that in both disorders the blood is mixed with the excrements. In the piles, the blood flows without any pain, or spasms, and is sometimes critical and healthy; on the contrary, a dysentery is attended with the most violent spasms, and painful gripes, and the whole body is in high disorder, especially if the small intestines are affected; for then, on the first days, there are vomiting,

vomiting, hiccuping, anxieties of the præcordia, loss of appetite, and great weakness. The white dysentery differs little in its nature from the red: in the white, little blood comes away; but in the red, the blood is more copious, with small pieces of films, or fleshy fibres.

We now come to pains, of which those of the head are most common. If the head-ache is caused by a more impetuous congestion of blood in the head, with heat, redness, and swelling of the face, and a great pulsation of the arteries of the neck and temples; the pain and heat sometimes extends as far as the bulbs of the eyes, with coldness of the extremities. If the head-ache is inveterate, and the offspring of venereal contagion, it is generally more violent in the night, is fixed to a certain part, and the skin is often raised by a kind of swelling. Besides, the cause of a pain in the head often lies in the external parts of the skull and pericranium; for if it is in the membranes of the brain, it is attended with a vertigo, redness of the eyes, a stupor, oblivion, difficulty of hearing, and even a palsy or an apoplexy precedes or follows it.

Another cause of the head-ache is an infusion of serum and blood from the vessels into the sinuities of the bones of the forehead; in this case the pain is obstinate, sharp, fixed, and situated in the bottom of the forehead, and above the eyes, never ceasing night or day. Sometimes the head is disordered from crudities in the stomach, which appear from belching, inflammations, and spasms of the primæ viæ, and the pain is increased by flatulent food, but is lessened by vomiting and evacuating stomachics. Another cause of a head-ache, but less known, is the extravasated lymph in the ventricles of the brain, where it stagnates, and is not carried off by the infundibulum, or pituitary gland; in which case the inward parts of the head are continually in pain, which cannot
more

more certainly be eased than by abstaining from drink, and taking the Solar Tincture, which evacuates serum, and my Cleansing Powders, in cachectic and cacochymic disorders.

The *cardialgia* exceeds all other pains for sharpness. It is a spasmodic pain in the orifice of the stomach. Sometimes the cause of it is in the stomach, and is a sharp caustic matter, as in case of a poison; in the bilious passion, or dysentery, it proceeds from a very sharp caustic bile. Another *cardialgia* proceeds from a suppression of the usual sanguineous evacuations, which regurgitate to the nervous membranes of the stomach. The cure consists in taking one of the Powders night and morning; but when it proceeds from a sharp caustic matter, the pain must be appeased by the use of the Solar Tincture, asses' milk, or cream, as well as the Powders. A *cardialgia* should be well distinguished from a painful inflammation of the stomach, when it is wonderfully distended with wind. In this disorder the pain is under the spurious ribs, chiefly on the left side, and under the pit of the stomach, towards the right; the tumour is like a bladder distended with wind, and is not uncommon; it brings on a great difficulty of breathing, with anxiety; it is greater the more the diaphragm is thrust upwards by the distended stomach, and hinders the expansion of the lungs. This disorder is most common to sucking infants, when the milk stagnates in the stomach, and being coagulated and corrupted, is rarefied into wind. It is pretty common to hypochondriacal persons, especially if they eat too freely; for by indigestion a great deal of wind is generated.

It is likewise necessary to distinguish the pain of the cholic from that of a stone descending by the ureters; for in the stone of the kidneys there is a deep pressing pain, which seems to be fixed in the loins, attended with a little shivering; it likewise

is attended with vomiting, and pains in the belly, when the stone is passing downward through the urinary passages; then the pain extends to the region of the *os ischium*, and brings on a stupour of the thigh of the affected side; there are likewise frequent inclinations to make water, which is attended with a strangury, and gravel often comes away. But the pain of the cholic is otherwise, for then the pain and gripes are more about the navel, shifting from place to place, and the belly is often distended with wind. But it often happens that the cholic is nephritic, which may be known from grievous pains in the belly, costiveness, vomiting, head-ache, coldness of the extremities, a stimulus to make water, till, the fit being ended, gravel comes away. The cholic which torments hypochondriacs lies in the hypochondria, and the left side is apt to swell, from wind in the flexures of the colon, and this pain returns oftener than the cholic.

If wind is the cause of the pain in the intestines, then there is a great inflation of the abdomen, which is sometimes so great that there is a wind-rupture in the region of the navel. When persons are subject to this disease, it proceeds from a refrigeration of the abdomen, or the feet, or from feculent drink, or flatulent food, especially if cold liquor be drunk after it. As many persons who are troubled with the gravel are liable to a flatulent cholic, the nephritic cholic is often confounded with it.

But if the pain of the intestines is attended with flatulencies, great anxiety, and a tensive pain of the back, with costiveness which returns upon the slightest occasion, and the face is cachectic, then the cause of the disorder generally lies in the viscera of the abdomen, through which the blood does not circulate regularly and freely, but stagnates in the volume of the intestines, and finding no exit through the hæmorrhoidal vessels, it continues between the membranes of the intestines, distending

distending and tearing them; whence proceeds the cholic, which is called convulsive, because the nervous system is grievously afflicted thereby. This stagnation of the blood, if it proceeds from a suppression of the hæmorrhoids, produces a violent pain in the intestines, which is said to be hæmorrhoidal; and if it proceeds from an irregularity of the menses in women, the blood returns back to the volume of the intestines, and produces gripes, which are called an hysterical cholic. Another kind of cholic is the *bilious*, and is common to men of choleric constitutions, prone to anger, and of great sensibility. This is generally attended with vomiting, the head-ache, or a diarrhœa, and because the free descent of the bile to the intestines is hindered by a spasmodic constriction, it regurgitates to the habit of the body, and produces a yellow colour in the face.

It is likewise necessary to distinguish a convulsive cholic from the other kinds; for it disturbs the nervous and membranous parts of the whole body, by consent, in a terrible manner, insomuch that a violent spasm is spread through the whole system of nerves, and then not only the stomach and intestines are drawn upwards and downwards, with obstinate costiveness, but the muscles of the belly and navel are drawn inward. If the nerves of the lungs are affected by the violence of the spasm, the breathing is very short and difficult, with a strong motion of the thorax. When the disorder increases, the membranes of the brain and nerves are affected, whence a vertigo, scotomia, slight delirium, watching, and a great coldness of the extreme parts, with a most violent agitation of the feet and arms, which often ends in a palsy of those parts.

Workers in metals are greatly subject to this disease, especially those that are concerned in melting lead, and draw the steams in with their breath.

breath. Likewise the scorbutic and cachectic are liable to this disease, as well as those in whom the hæmorrhoidal flux is suppressed, or irregular, or who have had an ague imprudently cured with astringents. Sometimes it proceeds from worms; or from a stone in the bilious ducts. Hence we see the complaint is not easily corrected, or evacuated, as in the flatulent and bilious cholic, but is in the nervous and membranaceous parts, which easily produce these spastic motions. Likewise the cardialgia, and convulsive pain of the intestines, in very sensible bodies, proceeds from strong affections of the mind, terror, frequent anger, spirituous liquors, and the like.

There are great mistakes committed with regard to the gout and rheumatism. The pain in both is spastic, and infests the membranaceous parts with redness, heat, pain, swelling, and loss of motion; but the arthritic pain proceeds from a sharp tartareous serum in the joints, and the rheumatism is derived from a serous salino-caustic matter, situated externally in the membranes of the muscles and ligaments of the joints. In the gout, the mucous glands of the joints and the glandulous ligaments contain the arthritic matter; on the contrary, the stagnant acrid serum of the rheumatism too plentifully congested in the vessels from the blood, is collected between the interstices of the membranes and muscles. Whence the reason appears why the cure of the rheumatism is more easy than that of the gout, and why topics, or the bare external use of the Solar Tincture, will remove the pains of the former, but must be taken internally, as well as used externally, in the latter.

The gout must likewise be distinguished from venereal pains; for the gout is more violent in the day, the lues venerea in the night; the gout has also a febrile motion, the other not. The gout has likewise stated times, and is exasperated by sharp

sharp medicines, mercurials, and the like; whereas the French disease is mitigated by these. There is likewise a peculiar difference between pains of the joints, of the legs, or feet, with tension, stiffness, imbecility of moving, and raging epidemically, and true arthritic pains. At some times, and in some constitutions of the air, we frequently hear of pains in the legs, of which some are sensitive, others obtuse and dull; others pungent, lying among the bones of the tarsus and metatarsus, with immobility, stupour, and rigidity of these parts; which pain is increased by motion. Those are subject to it who are bled in the foot, and expose themselves to a cold air, after which comes on weakness of the affected member, and the pain, which continues for some months, and is mistaken for the gout; but there is no fever, swelling, redness, nor heat, neither in the joints, nor in the periosteum; therefore cannot be called the gout.

Let us now proceed to convulsive and spasmodic disorders, called *coughs*. Of these there are several kinds; if the cause of the cough is in the lungs, there is a difficulty of breathing, which is increased upon motion, or agitation of the body or blood; likewise there is often a shrill voice, a pressing pain in the breast, and a hoarseness. If it be dry, and continue long, there are generally hard tubercles, or vomicæ, full of matter; and the cough is consumptive. But if it be moist, and great plenty of viscid matter be brought up, it is a sign there is a collection of matter in the cavity of the lungs; in this disorder there is a difficulty of lying on the affected side, and pure matter, or mixed with blood, is brought up, which leaves no room to doubt that the lungs are affected.

Tussis stomachalis, or a stomach cough, is sometimes moist, and sometimes dry. If moist, a
thick

thick and copious spittle is brought up after meals, generally with vomiting, the cough is more violent after pectorals and sweet things, and is most troublesome in the morning. There are likewise spasmodic and flatulent disorders in the abdomen, neither do the excretions by stool continue regular. In a convulsive, or hooping cough, that is violent and dry, the cause is chiefly in the nervous coats of the stomach, and there is a violent concussion of the whole thorax, with a deep sound; this is greatly increased after cold drink, or acids. In this obstinate cough, the hypochondria generally are disordered, or there is a scorbutic and salt diathesis mixed with the blood; wherefore this cough is not unfrequently attended with a miliary fever. If the matter lurk in the duodenum, which is often the case in intermitting fevers, especially tertians, as also in hypochondriac patients, then acrid eruptions and flatulencies are present; especially in the paroxysm after shivering, and causes a bilious and acid vomiting. Children are frequently troubled with hooping-coughs, partly because the system of their nerves is very prone to spastic convulsions, partly because acid and bilious crudities are commonly seated in the stomach and duodenum. Children frequently vomit after the cough, but sometimes it is quite dry, and one would think that they were in danger of being strangled.

The asthma is a common disease, and has various causes, which are variously seated, which makes divers kinds of this disease. The common cause is in the stomach, and then it is a flatulent asthma; for the stomach being inflated, hinders the free descent of the diaphragm. This is common to the hypochondriac, who have a weakness of the stomach from flatulent food, which is mitigated by vomiting. A convulsive asthma is greatly

greatly different from that which is humoural or sanguineous; for it is periodical, and comes on at certain intervals, chiefly in the night; the breathing is sometimes so difficult, that the patient cannot lie down without danger of suffocation. There is often a cold sweat, which continues for twenty hours, and more, and brings on a fainting. There is generally perceived a constrictive compression of the thorax, which is often extended to the neck. In this disease, a disorder of the viscera of the abdomen is generally present; especially of the liver, whence a cachexy arises. But if the asthma proceeds from a polypous concretion of the vessels of the heart, then there is a palpitation of the heart. Lastly, which is commonly the case, the cause of the convulsive and suffocating asthma is a great extravasation of water in the cavity of the thorax; out of the paroxysm there is a fixed pain in the side of the thorax, where the water is contained, and the foot of the same side is apt to swell, or both; and the paroxysm is long and violent, with great anxiety, but without a cough, and is often fatal.

The difference is not less between a convulsive asthma, and a suffocating catarrh; for this is a kind of palsy affecting the nerves which serve for respiration, and comes on unawares, with great anxiety and wheezing; the face is swelled, and looks red, and suffocation is at hand. But a convulsive asthma is a more periodical and chronical disease, and a suffocating catarrh is more properly reckoned an acute disease. In this there is perceived a constant afflux of matter, which is wanting in the asthma; likewise a great loss of strength more commonly attends a suffocating catarrh, than a convulsive asthma. A suffocating catarrh is most common to infants, to the weak, and to very old persons; especially when the exanthemata are driven back, such as the small-pox, measles,

tinea capitis, achodes of the face, the itch, and the like.

We come now to the *apoplexy*, which is like a syncope, for there is in both a loss of all the senses, and yet there is a remarkable difference; for in this the pulse and breathing are not perceptible, the face is pale, and the body is cold; but in the apoplexy the breathing continues, the face is often red and florid, and the pulse still beats. But the difficulty is greater to distinguish the spurious from the true apoplexy. The spurious is frequently an hysterical symptom, and proceeds from the violence of the spasms in the abdomen, in which the blood is redundant from the stagnation of the menses; which being carried to the brain with force, stops in its vessels, and intercepts all sense and motion, except the pulse and breath. It is commonly taken for a syncope, or hysteric epilepsy, but not rightly, it is seldom fatal, for when the stricture is relaxed, or the patient is let blood, it easily abates. A true apoplexy is more dangerous, which from the bursting of the blood or serum from the vessels, is often fatal; likewise a complete apoplexy is to be distinguished from the partial, for the former proceeds from the bursting of the vessels of the brain, the latter from their too great distention and stagnation of the blood therein, which frequently induces a palsy, and a debility of the senses, but does not kill.

The *palsy* is likewise to be distinguished into the true and false; the former has its seat in the brain, or the beginning of the spinal marrow, and takes away almost all sense and motion. But the spurious is milder, and has not taken so deep a root in the brain, but in some certain nerves belonging to particular parts, and only hurts the senses and motion. This is generally derived from the choleric, and the more grievous cardialgic and spasmodic affections, especially if there is a stagnation of the blood in the plethoric, and the blood is transferred

ferred to the nerves and muscles which move the the hands and feet, and deposits a viscid serum; which lodging on the nervous membranes, induces an impotence of motion, the sense of feeling being yet unhurt.

An *epilepsy* must be distinguished from convulsions. For in the former the membranes of the brain are affected, in the latter the membranes and nerves of the spinal marrow are more concerned; nor are the thumbs so greatly contracted, though the limbs are very forcibly convulsed. Convulsive motions likewise greatly affect boys about fourteen years old, from violent anger, sudden terror, refrigeration of the body, or worms; and there is such a strange distortion and shaking of the limbs, that they are commonly attributed to witchcraft. The mind, in some, is likewise disturbed with various fancies, if it is not opportunely and readily cured; and will sometimes come on twenty times a day, or oftener. The epilepsy is connected to some stated phases of the moon, and is not so frequent, generally ceasing about the time of puberty. Lastly, a catalepsy differs from an apoplexy, because the former comes on suddenly, and keeps the members quite stiff, and in the same posture as at the time of accession. In both there is an abolition of all the senses, with a stupour and sleep. In all these complaints, the Solar Tincture is highly serviceable, and calculated to remove, as it strikes at the root of diseases, not barely at the branches.

ON THE DIAGNOSTIC OF URINE.

THE urine is a serous and saline fluid, of a citron colour, separated from the blood, which the emulgent arteries carry to the kidneys; from whence it descends to the bladder, by the ureters, and is emitted, from time to time, by the canal of the urethra.

The urine is therefore the serosity of the blood, but not pure, for it is loaded with saline, sulphureous, and terrestrial particles, of which it is the menstruum and the vehicle.

The urine of four-footed beasts is troubled and muddy, that of men is more clear and limpid; in infants it is more pale and thick than that of middle-aged persons. In the very old it is more clear, thin, and has not so much colour; in hot bilious constitutions, it is more of a saffron-colour; in the cold and pituitous, pale; wine-drinkers have it of a higher colour, and more thick; in those that use much exercise, it is little and red; in the sedentary, it is pale, with a large sediment. After meals it is copious, insipid, light, raw, and without smell; after long fasting it is of a higher colour, acrid, and little. Those that sweat much, make little water, which is more muddy and yellow.

The sides of the bladder are guarded by a mucilaginous fluid, excreted by the glans which are between its coats; by which means the urinous salts make the less impression upon it. This fluid forms the glair, which falls to the bottom of the vessel, when a person is afflicted with the stone.

It is observable, that there are three sorts of substances, differently placed: the *nubecula*, the *enæorema*, and the *hypostasis*. The *nubecula* is a sort of pellicle, which swims on the top of the urine, and consists of the saline and fibrous particles of the blood, mixed with the serosity. When it is exposed to the fire, it changes to a crustaceous substance. The *enæorema*, or suspension, is a white, light, spongy matter, which swims in the middle of the urine, consisting of particles of a different nature. The *hypostasis*, or sediment, is a saline, sulphureous, and terrestrial matter, which precipitates to the bottom of the urine.

Diseases cause a remarkable change in the urine.

Light,

Light, thin, watery urine, shews the person to be afflicted with internal spasms, the hysteric passion, hypochondriac pains, the cardialgia, the stone, or gravel, or the convulsive cholic. In diseases of the head, such as the vertigo, frensy, madness, melancholy, epilepsy, the urine is always thin and light. It is likewise the same in the more grievous affection of the nerves, from poison or worms. This state of the urine not only happens in the fits, but some days before and after.

When the urine is thin, aqueous, and white, it presages danger in obstinate diseases; if it is copious in the state of fevers, and before the crisis, it portends a frensy. In internal inflammations it is always dangerous; the more copious, the worse.

After a dysentery, a spotted fever, or small-pox, this kind of urine is common. In a cachexy, leucophlegmatia, enormous bleedings in the beginning of an anasarca, in the green-sickness, in a suppression of the menses, the urine is crude, turbid, pale, greenish, or of a light citron colour, and copious.

In all preternatural febrile heats, the urine is yellow, or red, and in small quantity. Such kind of urine which is more or less red, or thin and light, or thick and heavy, is usually in intermitting and continual fevers. In the fit, that is, in its exacerbation or state, the urine is thin, clear, and without sediment; in an ardent and bilious fever, the urine is generally pellucid, but of a flame colour. In intermittents after the fit, and on the well day, it is thick, and deposits a sediment; if this happens in continual fevers, after the crisis, it shews the fever to be ended.

If the sediment is of a rosy or purple colour, it shews the blood is in fault, as is evident in continual fevers. When it is intensely yellow, it discovers that the bile is in fault; when it is brown,

or black, there is plenty of black bile, as in a scorbutic or miliary fever, and in quartans of a dangerous nature. When it is very plentiful, and full of viscid and crude humours, in replete, obese, and spongy bodies, it shews the obstinacy of an intermittent fever.

As it is a good sign when the urine is thick, and deposits a sediment, in fevers, so, on the contrary, if there is no sediment in intermitting fevers, but the urine continues clear, and lets fall no sediment in the cold fit, it is a bad sign. If, after the fit, it has no sediment, but is pellucid, it is a very bad omen. In all inflammatory fevers, if the urine is clear, and of a purple colour, or brown, and of a deep colour, frothy, and without sediment, it is a bad sign. Likewise, it is always observed, that in a continual fever, if the urine is turbid, and does not grow clear either by the fire or rest, nor deposits a sediment, it is a very dangerous preface; it is likewise very bad, when, in continual fevers, it is thick on the first days, and in the remainder, especially the critical days, it is thin and without sediment.

In the decline of catarrhal fevers, and in the small-pox and measles, if the urine was clear and aqueous, but is now thick and high-coloured, with a sediment, it is a certain sign that the disease remits.

In consumptions, and all other violent and chronical diseases, if the urine is thick, little, high-coloured, and a dark red, with a copious sediment, and a fatness swims upon the urine, and adheres to the sides of the urinal, the body at the same time wasting away, it is a sign of a slow hectic fever, which is generally fatal. The like danger is threatened, when, in dropical persons, the urine is like that of hectics; for its scarcity is a sign that the lymph is extravasated into some cavity or porous substance, and if the colour is of a deep red,

red, with a gross sediment, it shews the intestine motion and heat dissolves the blood, that the liver is obstructed, whence a bilious fordes is separated therefrom.

In chronical diseases without a fever, when the urine is thick, high-coloured, and of a reddish brown, as well as heavy, as in a confirmed scurvy, gout, scorbutic palsy, and in extreme old age, as also in a nephritic passion, when the pains cease, as well as in the yellow and black jaundice, it shews plenty of saline and sulphureous excrementitious parts, wherewith the blood and humours abound, and are not duly secreted therefrom, by reason of an obstruction of the liver. WILLIS has observed, that patients dying of the scurvy, have had their livers almost without blood, and like a cow's udder; in some, the gall-bladder was either empty, or full of stones, or very bitter filth.

When the urine is thick, of a deep colour, and dyes linen yellow, it is a certain sign that the bile is obstructed, or the ducts constricted with a spasm, whence the passage of the bile into the duodenum is hindered, whence it regurgitates by the lymphatic vessels into the blood and lymph, and produces a jaundice. When the colour is of a brownish black, it is a sign of the black jaundice, which proceeds from an impeded secretion of the bile in the liver.

Sometimes the urine is imbuted with an oily matter, and is made without noise, there are various colours on the surface, chiefly blueish, and it adheres so strongly to the sides of the urinal, that it cannot be washed off with a lixivious liquor. This is a sign of the colliquation of the fat. SILVIUS gives an instance of a young woman who had it like butter; and FERNELIUS mentions a man, who, in eight days, was reduced from a large size to be very slender, without any other disease; it shews a consumption, an atrophy,

phy, and a hectic. Sometimes this is observable in fevers, and the oleous matter is more plentiful in proportion to the fatness of the body.

When the urine abounds too much with a tartareous matter, which is known by its adhering to the sides of the vessel, it is a sign of a disposition to the gravel and stone. When there is small sand in the urine, it shews those disorders to be actually present. Sometimes shining yellow chrystals are seen on the sides of the pot, which is a sign of arthritic or rheumatic pains. When the urine is bloody, or whiteish, from a mixture of pus, or loaded with a glutinous, thick, tenacious matter, of a bad smell, which sinks to the bottom, and does not dissolve by the agitation of the vessel, it is a certain sign of an ulcer in the kidneys or bladder; sometimes in the stone and ulcer of the bladder, it is like the white of an egg, and so tenacious, that it will not divide, but falls from the vessel at once.

In a chronical and malignant gonorrhœa, not only the prostatæ, but often the bladder is ulcerated, whence a thick, turbid urine, with a copious sediment, which thrown on the coals, has a most fœtid smell. Likewise in the stone of the bladder, this, or its sphincter, is so eroded, that the urine is thick and branny, with small caruncles and filaments, which the vulgar take for worms. In the strangury there is a frequent stimulus to make water, which is little and muddy, salt and sharp, with filaments; and then there is some spasmodic disorder affects the sphincter. If blood is mixed with the urine, like the washings of flesh or red wine, but falls to the bottom, of a purple colour, it proceeds from the kidneys; but if it be of a brownish black, it comes from the veins of the bladder.

DIETETICS; OR, THE USE OF THE NON-NATURALS.

THE non-naturals are six :---the air, meats and drinks, sleep and watching, motion and rest, the passions of the mind, the retentions and excretions.

The air is a fluid, elastic substance, which surrounds us on all sides, which penetrates our bodies, and yet so fine, that it escapes our sight. Its properties are fluidity, elasticity, and weight ; it is rarefied by heat, and condensed by cold.

It is so necessary, that an animal cannot live a moment without it, and it serves for respiration to transmit smells, colours, and sounds. By its fluidity it insinuates into the vesicles of the lungs, and into the blood, by means of the aliments. By its elasticity, the small quantity of it contained in the blood, keeps up the equilibrium with the weight pressing externally upon our bodies.

The air is susceptible of different qualities. It may be hot, moist, cold, dry, serene, pure, and temperate. It is subject to variations, more or less, and to be mixed with impure, corrupted, contagious, metallic, sulphureous exhalations, which are all prejudicial to health. The best quality of the air is to be pure and sweet, void of all bad exhalations, neither too hot, nor cold, nor dry, nor moist.

The sudden changes of the air are enevitable and dangerous, whence proceed a great number of diseases, which reign in the spring and the autumn, towards the approach of winter. Hospitals, camps, places where lead is melted, and the earth just thrown up, are generally unhealthy, on account of the bad exhalations. Lighted charcoal in a close place fills the air with sulphureous particles, which are unwholesome, and sometimes kill the strongest persons.

Too

Too hot an air disposes to malignant fevers ; if it be without moisture, it produces putrid fevers. Agues are epidemic in the fens of Cambridgeshire, the hundreds of Essex, and in some parts of Kent, on account of the vapours, which weaken the fibres of the body, and obstruct the pores of the skin ; besides, a cold and moist constitution of the air produces coughs, distillations, pleurifies, rheumatic pains ; as also agues and fevers of the like kind.

Hætic and consumptive people are in great danger in very hot and in very cold weather. When the passage through the pores of the skin is stopped by cold, the patient is apt to fall into a looseness, otherwise the legs commonly swell, and asthmatic symptoms will increase.

The loss which we sustain daily, makes it necessary that it should be repaired by substances analogous to those of our body, such as aliment and drink, the stimulus to which is hunger and thirst ; wherefore it is necessary to know in general their kinds and principal qualities, in order to make a proper choice.

Solid aliments are taken from seeds, fruits, leaves, stalks, and roots ; of all which the seed is the most laboured, and contains a mealy and milky substance, from whence a soft oil may be drawn, friendly to human bodies.

The principal and most general aliment is bread, which is made of wheat, rye, barley, and Turkey corn. That of wheat is most nourishing. Barley is dry, and rye is laxative. The crust is most easy of digestion ; the crumb is more oily and heavy.

The other farinaceous substances are beans, peas, and lentils, which nourish much, but are heavy, windy, and viscous ; and consequently, for constant use, are apt to cause obstructions.

Rice, barley, and oats, properly prepared,
are

are moistening, emollient, and restorative. Nuts, almonds, and chefnuts, are full of a nourishing oil, but are hard of digestion.

Fruits which are pulpous and tart, abound with water, and are refreshing, moistening, and sedative; appeasing the too rapid motion of the blood, quenching thirst, and digesting easily; such as strawberries, gooseberries, currants, apricots, and figs; as also peaches, pears, and apples: these should be eaten ripe, and in a small quantity; but they are windy, and therefore are best boiled, or baked, and made into sweetmeats.

Pot-herbs and roots are less nourishing than the mealy substances. Lettuce, succory, sorrel, purselain, refresh, moisten, loosen the belly, and appease the orgasm of blood. Artichokes, cellery, cresses, asparagus, and parsley, are a little heating. Truffles, champignons, garlic, shallots, pepper, cloves, nutmegs, mustard, &c. heat very much.

Animals are terrestrial, volatile, aquatic, or amphibious. These differ greatly with regard to their kind, age, manner of living, and substance.

Fish nourish the least of all animals, because they abound with phlegm. Young animals abound with a soft and nourishing juice, but that of the older is more substantial. The juices of the old are spirituous, gelatinous, and agreeable to the taste; but the flesh is hard, and difficult of digestion.

Wild animals are more light and digestible than the tame. Their white parts contain a very succulent substance of tender fibres, and yield a soft aliment, and are easy of digestion.

Liquid aliments are milk, eggs, chocolate, soup, and broths.

Milk is properly nothing but chyle, and consequently does not need any great preparation in

the stomach. It is a good aliment for weak persons, whose stomachs are languid, and for children.

New-laid eggs yield very good nourishment, are easy of digestion, and agree with persons of an exhausted body, and those that are old.

Chocolate is a very agreeable liquor, and nourishing; strengthens the stomach, restores the body, helps the digestion, and softens sharp humours. It is proper for persons of weak stomachs.

Drinks restore the fluid parts of the body; they are a vehicle for other aliments, and render the digestion easy. Water is the principal, most salutary, and most necessary for life; of which soft water is the best, and which readily lathers with soap. It is the greatest dissolvent that we have. Water alone has cured many indispositions; but over much relaxes and weakens the solids, and causes many infirmities.

Wine taken too freely, is prejudicial to health; but moderately, it strengthens the solids, and facilitates digestion; its excess, as well as all other spirituous liquors, hardens the fibres, affects the nerves, diminishes the secretions, destroys the appetite, and induces chronical diseases.

That malt-liquor is accounted best that is specifically lightest, and not saturated with too gross a substance, for then it does not offend the stomach, but passes readily through the emunctories of the body, and particularly by urine. The best kind of beer does not render the head heavy, nor grow sour on the stomach, nor inflate the hypochondria. This depends greatly upon the goodness of the water, the proper boiling of the ingredients, and a due fermentation.

All thick, muddy, heavy, stale beer, not sufficiently boiled, offends the head, generates wind, causes obstructions, the strangury, asthma, and the cholic.

Tea

Tea promotes perspiration, strengthens and clears the stomach, and helps digestion.

Coffee is taken after dinner to hasten the digestion, and allay the fumes of wine. Moderately used, it subtilizes the humours; but its excess agitates the blood, causes watching, and promotes hæmorrhages.

Broths or soups abound with a soft, moistening, and nourishing jelly, whence they are good restoratives. Meat that is roasted contains an excellent nourishing juice, the moist parts being dissipated by the fire.

Things that are fried are only proper for good stomachs.

Spice, vinegar, &c. in a small quantity, may correct the faults of the aliment, but are pernicious when used to create an appetite; whence made dishes are commonly bad. The appetite excited by the quality and diversity of the viands, provokes persons to eat more than they ought; which causes indigestions, frequent indispositions, and sometimes dangerous diseases. Therefore the skill of the cooks of these times, contributes greatly to shorten their masters' lives.

The method of preserving health, therefore, is to live upon plain, simple aliment, lightly seasoned, and in a quantity agreeable to the age, strength of the stomach, season of the year, sex, constitution, and chiefly to what nature has been found by experience to require. For it is as great a fault to take too much as too little. Perfect digestion is the best rule for regulating a meal, especially if the person is more brisk and lively after a repast than before.

We have examples of many persons, who by their frugality have lived to a very advanced age; wherefore those that are fond of life and health, should imitate their regimen. Excesses in eating and drinking are extremely pernicious.

Persons of a delicate constitution, or who are just recovered from a disease, should use soft, light aliment, agreeable to the stomach; for they make the best chyle.

Acrid, tenacious, viscous aliment, pies of all kinds, and things that are fat, and of a blackish substance, are generally unfit for chylification, or they render the chyle bad.

Strong, robust, young persons, who use much exercise, ought to eat more than others; and may be more free with the grosser kinds of aliment. For their stomach being strong, the lighter kind of food would digest too easily, and be dissipated too soon.

Children whose stomachs are weak, and vessels fine, ought to use a light, thin, slender, soft aliment, easy of digestion. Wherefore infants should be fed with fluid milk, to avoid causing obstructions in their fine and delicate vessels. Wherefore the milk of a nurse newly brought to bed is more agreeable to infants than that of one who has been delivered five or six months, and whose milk begins to have too great a consistence. Nurses should observe an exact regimen, and shun all sorts of violent passions; for they disturb digestion, and communicate their bad effects to their children. When infants are weaned, they should not be accustomed to spirituous liquors and strong food, especially the salt and smoke-dried, which are hard of digestion, and yield bad nourishment. The best method is to eat little at a time, and often.

In old age the fluids are more thick, the secretions flow, and the solids more stiff than in youth; wherefore they require less food, and of a more soft, nourishing, and moistening kind, easy of digestion, and not too much at a time, especially in the evening.

At all times of life, but especially in old age,
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the constant and immoderate use of salt and smoke-dried meat, acid and aromatic vegetables, as well as spirituous liquors, tend to harden and to stiffen the parts of the body, instead of affording good nourishment. Besides, the digestion of these aliments is difficult, and render the blood so acrid, as to hurt the capillary vessels.

However, an acquired habit is hard to be left off, and we find many persons enjoy a good state of health when their meat and drink are very indifferent, because they are become customary, and they are apt to fall sick when they attempt to change their manner of life; for custom is a second nature. All great changes ought to be brought about insensibly.

For this reason it is good not to contract a habit of any kind; wherefore persons of a good constitution should live in a various manner, and refuse no kind of aliment; and should sometimes be in town, and sometimes in the country, should use much exercise, and should every now and then exceed the exact bounds of moderation, and at other times omit a meal now and then.

Hunger shews the best times of eating, but custom confines us to certain hours. Persons who find no inconvenience from dining and supping every day, need not change their manner of life. In youth, wherein there is a great dissipation, and in age, where strength is wanting, and when much is not eaten at a time, something taken between meals is not amiss. However, it is necessary to observe, that when the stomach is bad, persons should not begin to eat again till the last meal is digested.

When a person is greatly fatigued, and his spirits dissipated, it will be necessary to rest before eating. In cases of distress and sorrow, the aliment should be very light, and in small quantity, because the stomach is weak at those times.

In

In the summer, when the spirits and fluid parts are apt to evaporate, the aliment should be light, moist, fluid, and easy of digestion, to repair the loss with greater speed; whereas in winter the stomach will admit of grosser food.

As digestion depends, in part, on the due preparation of the aliments, it is necessary to chew them well, especially if they are hard, that they may be more intimately mixed with the saliva. For those who eat in a hurry, without much chewing, are very subject to indigestions. For this reason infants should have little solid aliment, and old persons, and those who have lost their teeth; for mastication is of excellent use to promote digestion; wherefore light food is best for those who cannot perform it.

It is not possible for those to preserve their health, who do not go to sleep in a regular manner; for sleep repairs the spirits which are dissipated by watching; and consequently it restores the strength of those who are weak, indisposed, or labour much; it likewise promotes perspiration, contributes greatly to digestion, and more to nutrition.

The night, when all nature is in a profound tranquillity, is the most proper time for sleep; for the vigour of the body and mind are better restored in the night than in the day. Thus nocturnal labour and lucubrations impair the health.

A sound undisturbed sleep is much the best. Unquiet interrupted sleep contributes little to restore the strength, but hinders perspiration and digestion.

Exercise and custom ought to regulate the duration of sleep; six or seven hours at a time is generally thought to be sufficient; for too much sleep makes a person sluggish and heavy, dulls the faculties, and renders them unfit for business.

Immoderate

Immoderate watching is as prejudicial to health as sleep is beneficial. It may occasion great disorders in the animal economy, by wasting the spirits and fluid parts of the blood. The best place for sleep is in a dry spacious room, where the air is good; for close, little, moist places, too much heated, are bad. The best posture is to lie on the right side at night, and on the left in the morning, with the head raised, and the body bent.

Motion and rest contribute no less to health than sleep. Motion or exercise increases the circulation of the blood, attenuates and divides the fluids, and promotes a regular perspiration, as well as a due secretion of all the humours; for it accelerates the animal spirits, and facilitates their distribution into all the fibres of the body, which strengthens the parts, creates an appetite, and helps digestion. Whence it arises, that those who accustom themselves to exercise, are generally very robust, and seldom subject to diseases.

But immoderate exercise dissipates the spirits, weakens the body, destroys the elasticity of the fibres, and exhausts the fluid parts of the blood.

Exercise may be said to be either active or passive; the active is walking, hunting, dancing, playing at bowls, and the like; as also speaking, and other labour of the body and mind. The passive is riding in a cart, coach, on horseback, or in any other manner. Exercise may be continued to a beginning of weariness, and ought to be used before dinner, in a pure light air. For this reason journeys and going into the country contribute greatly to preserve and re-establish health.

Moderate rest, in proportion to the exercise, is likewise salutary; but a sedentary, idle life, brings on many indispositions.

Excretions (I mean those which evacuate superfluous and heterogeneous humours) purify the mass of blood. The humours which are generated

rated in the blood, are excreted by the glands, and are replaced by a sufficient quantity of aliment. This, in adults, keeps the body of an equal weight, and consequently preserves life and health. Therefore the secretions should neither be disturbed nor diminished, suppressed nor increased. I shall observe, that perspiration may be promoted by dry frictions, with a coarse linen cloth, or a flesh-brush, and by cleaning the skin from time to time by warm baths, washing the hands, feet, head, and other parts, which perspire much.

It is well known that cold stops the pores, and diminishes both sweat and perspiration. To shun this inconvenience, it will be necessary to put on winter-garments pretty early, and to leave them off late, and not to pass too suddenly from hot into cold air, and to avoid drinking any thing cold when the body is hot, or when a person has been speaking publicly for some time.

The passions and affections of the mind produce very sensible effects. Joy, anger, and fear are the principal. In the first, the spirits are hurried with too great vivacity; and in fear or dread, they are, as it were curbed and concentrated. Whence we may conclude that they have a bad effect upon health, and therefore it will be best to keep them within bounds as much as possible, and to preserve an inward serenity, calmness, and tranquillity.

Continual sorrow and anguish of mind render the fluids of the body thick, and generate viscid and acid crudities in the stomach, and at length render the blood unapt for a due circulation; whence proceed obstructions of the viscera, and many chronical disorders. Anger constricts the bilious vessels in particular, causes too great an evacuation of the bile, and produces strictures in the stomach and duodenum; whence the bilious humours are amassed and corrupted, laying the
foundation

foundation for vomiting, bilious fevers, and cardialgiæ. Passions of the mind in general chiefly affect the stomach, invert its motion, and hinder digestion and chylication; whence many erudities arise, replete with various diseases; and it is very dangerous after violent commotions of the mind to sit down to a meal, or during that time to be greatly affected with any accident that may happen.

REMARKS ON THE CONSTITUTION OR
TEMPERAMENT OF BODIES.

THERE are as many definitions of a temperament, as there are different systems or principles. The peripatetics say it is a mixture of the four first qualities. An equal temperament, then, is when one does not predominate over the other, or when they preserve a certain proportion, suitable to nature. But this is seldom or never to be found; for temperaments differ according to the sex, age, climate, country, season, and kind of life. The common division of the temperaments was into hot, cold, moist, or dry. Which compounded, were hot and moist, hot and dry, cold and moist, and cold and dry.

Dr. BOERHAAVE, in his Institutions, mentions eight different constitutions, or temperaments, of human bodies: viz. hot, cold, moist, dry, bilious, sanguine, phlegmatic, and melancholic.

Some of the ancients regarded only the fluids, which they determined to be four: the blood, phlegm, choler, and melancholy, or the *atra bilis*; hence there were four kinds of temperaments: the sanguineous, the phlegmatic, the bilious, and the melancholic, which being variously compounded, made as many different temperaments.

Some of the moderns imagine that the essential parts of the blood are acid, austere, acerb, saline, acrid, bitter, oily, sweet, and insipid; wherefore

they make the temperament to consist in a due proportion or mixture of these; and when any of them predominated, the temperament was said to be unequal.

Those who refer every thing to the solids, and look upon the fluids only as passive, and governed by the systaltic motion of the vessels, deduce the temperaments from the spring of the fibres, whereof the body is composed. According to these, the fibres are more or less strong, firm, or lax; and their elasticity, their systole, their oscillations are more or less lively, frequent, and regular; whence the temperaments become strong, lax, hot, cold, moist, dry, or unequal.

Others, again, say, that the temperament is a particular disposition of the human body, which results from the properties and mutual actions of the solids and fluids; and which renders them capable of exercising the functions proper and conformable to nature.

An equal temperament is that wherein the four qualities, heat, cold, dry, and moist, or the four humours, blood, phlegm, bile, and melancholy, are mixed in a due proportion; in which the solids and fluids have a proper equilibrium, so that the fibres are neither too hard nor too soft, nor too tense nor too lax; and which procures, by their constant systoles, a progressive and circular motion to the liquids, which tend to attenuate them, while the liquids on their part have a consistence and softness proper to comply with the motion of the vessels, and to act upon their sides by their elasticity and reaction, without irritation. Such persons in their diet should use only temperate aliments, and carefully avoid both things which may render their bodies hotter and dryer, and likewise those things which tend to make them cooler and moister.

A hot or sanguineous temperament requires
strong

strong, robust fibres, regular in their systoles and oscillations, with a red, soft, balsamic blood, and full of spirits; the persons are neither too fat, nor too lean, but have a fresh, florid complexion, a strong, regular pulse, an easy respiration, sweet sleep, and are gay, sincere, polite, modest, and amorous. People of this constitution should make use of diluting and moistening aliments, for all heating and drying food should be avoided, or very sparingly used.

The moist or phlegmatic temperament consists in soft, moist, lax fibres, whose systoles and oscillations are weak and languid; the fluids too aqueous, insipid, raw, indigested, and copious. The pulse is soft, slow, sluggish, and deep. The skin, the flesh, and the fat are pale and soft. The hair is lank, and of a light colour. The person is heavy, indolent, timid, and fearful; void of vivacity, of the senses, and actions.

The dry and bilious temperament consists of slender, stiff, dry, hard, tense, and too elastic fibres, which move and agitate the fluids with too much impetuosity. The bile predominates in the fluids, which are thin, acrid, saline, and sulphureous, and irritate the solids and systoles. The heat of the body is considerable, the aqueous parts are dissipated, the sulphureous are attenuated, insensible perspiration is too copious, and the spirits are subtle and active. The person is lean and dry, the skin yellow, the hair red and curled, the pulse quick and hard, the senses lively, the sleep short and disturbed, the mind ready, light, inconstant, and choleric; the passions for pleasure are strong. The blood is generally of a dark colour; and the *bile* subject to be changed into a black colour, called *bilis atra*; those of this constitution require aliments somewhat warming and corroborating, and should be cautious in the use

of things that are cooling, and which tend to render the quantity of lymph excessive.

The cold, melancholy, or atrabillious temperament proceeds from thick, compact, dry, stiff fibres; and fixed, gross, acid, austere, saline humours; whence the systaltic motion of the solids are strong, steady, and slow. The animal spirits are gross and elastic; the persons are strong, robust, laborious, and a little lean; their complexion is brown and blackish, the hair black, the pulse slow and strong, and their looks rough; they are apt to be absent in thought, silent, grave, laborious, solitary, inflexible, and void of compassion; they are amorous, without politeness, but obstinate in love or hatred, and extravagant in their opinions; their sleep is disturbed, their dreams are dismal, they speak little, and are fond of their own notions.

But none of these temperaments are to be met with pure and simple. They are all mixed, and border upon each other, with as great a variety as there are faces in the world.

OF THE PRINCIPLES OF LIFE AND DEATH.

THE human body, as a system of living matter, contains an amazing construction of parts, admirably contrived, connected, and adapted to their proper uses, among which are various sorts of vessels, replete with their proper fluids; parts to receive aliments, and organs to *secrete digestive* or dissolvent humours from the blood, for converting our food into a nutritious chyle, as well as vessels to convey that chyle into the blood and vessels, to carry nutriment for repairing the daily waste of the body: so it hath organs for *excreting* from the body whatever may be superfluous, useless, or hurtful to it. It has organs for all those *senses* which may be useful to man. It has many bones;

bones; some for the defence of the noble parts inclosed within them: as the cranium is a defence for the brain. It has the vertibræ of the neck for the support of the head, and for the defence of the parts adjacent; it has the scapula, the vertibræ of the back, and the ribs, for the security of the heart and lungs; it has bones to sustain the trunk, and to form the limbs; it has muscles, not only as a clothing to the bones, but to be instruments of moving them according to all incidental occasions, or voluntary motions: and it has organs for secreting a fluid we call *nervous*; a fluid necessary to all the *vital*, the spontaneous, and to all voluntary motions; it has, likewise, organs for secreting the *semen masculinum*, and for all purposes of generation, for propagating the species.

The general fluids subsisting and circulating in all parts of the human body, are the blood, or red fluid, the lymph, and the liquor of the nerves.

The red blood is the central fluid, for which every thing taken into the stomach supplies nourishment, to maintain life and health; for which purpose all the *viscera*, vessels, glans, and other parts of the body serve either to receive, attenuate, prepare, and convey *aliment* to the *blood*, which becomes wanting by means of its daily expences; or to receive and separate from it those fluids which are necessary for maintaining the *vital*, the *natural*, and the *animal functions*. Or otherwise to separate or excrete from the blood what is hurtful or superfluous; and it is upon this account that the BLOOD may be esteemed the *central fluid* in the body; and, for the like reasons, the HEART may be called the central solid part of it.

Now, as the HEART is the centre of vital and spontaneous motions, we will attempt to trace those

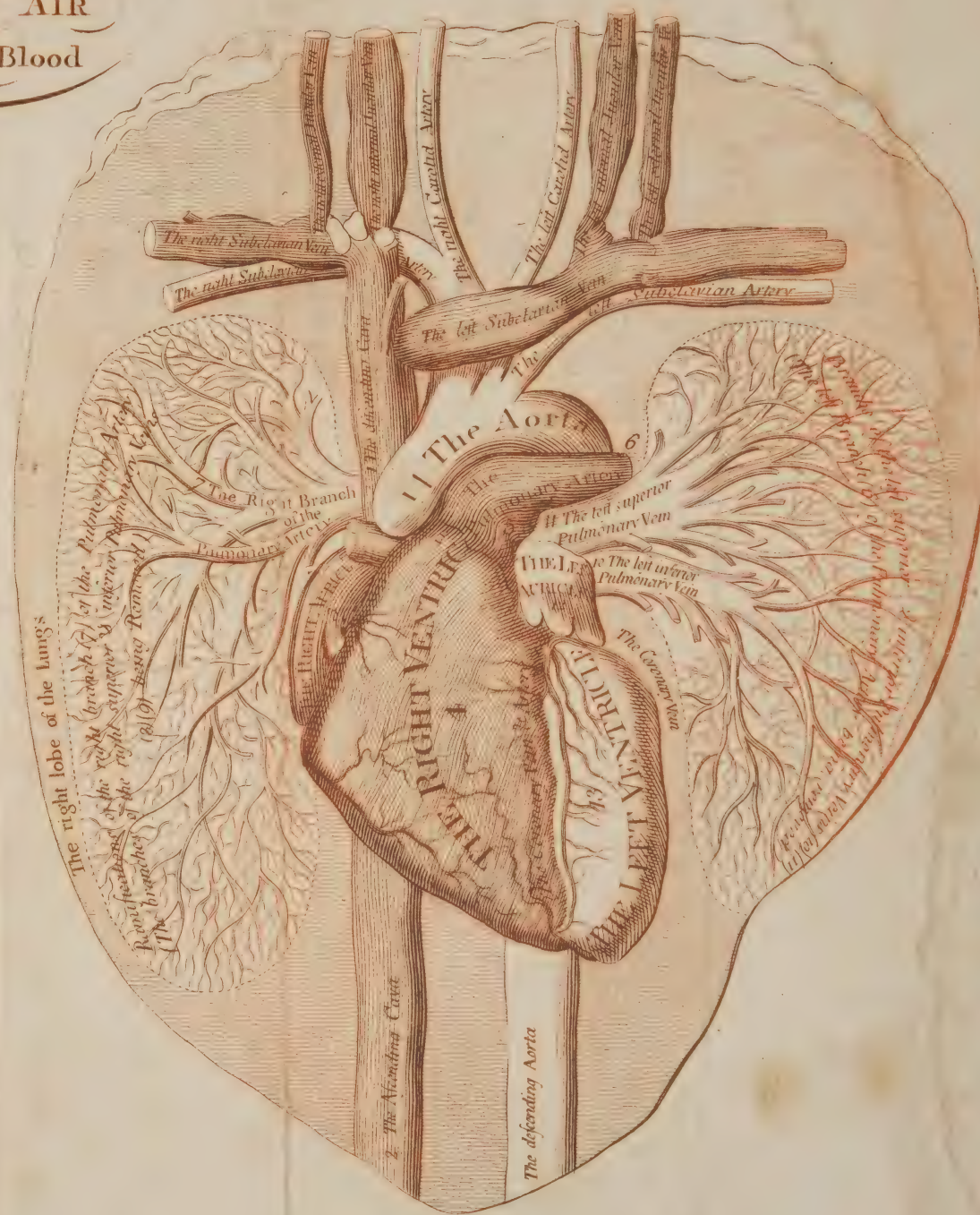
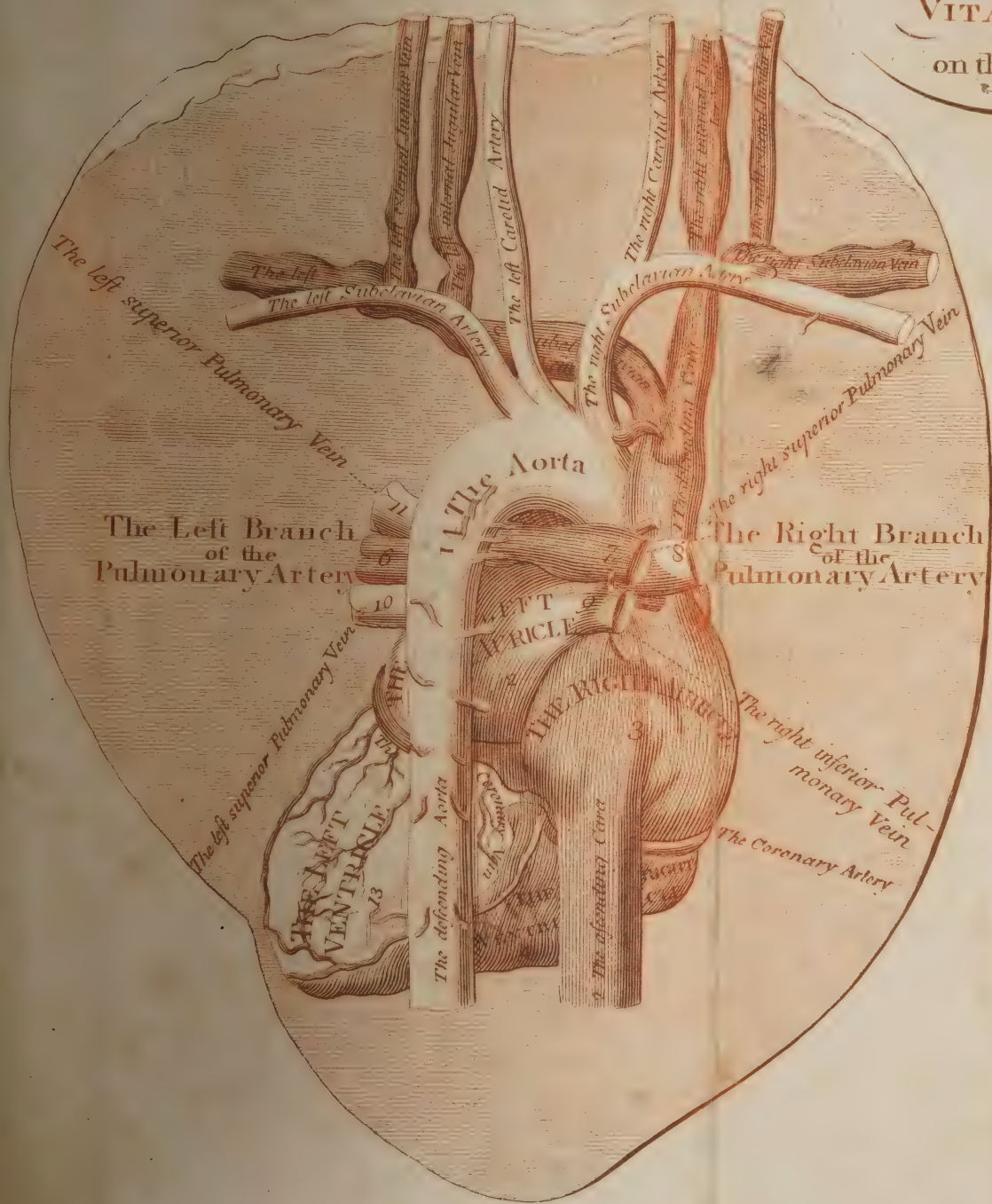
those motions and their effects. It is to be observed, that all the veins of the body enter into two trunks (*vide the Plate*): viz. the *ascending* (1) and *descending* (2) *cavas*, and empty themselves into the right *auricle* of the *heart* (3); from which the right *auricle* unloads into the right *ventricle* (4), which ejects the blood through the *pulmonary artery* (5) into the *lungs*, by its two branches (6, 7), and from thence to the right and left lobes. From the *lungs* the blood is returned by the *pulmonary veins* (8, 9, 10, 11) into the *left auricle* (12), and from thence it passes into the *left ventricle* (13), by which it is distributed through the body by means of the *aorta* (14) and its branches; these terminate in the veins of the body, which collect the blood, and bring it back to the heart, by the two *cavas* (1, 2); for the heart is divided into two parts, by a longitudinal separation, and these two parts are formed into two cavities, by a lateral separation.

By this it appears, that the *left ventricle* of the *heart*, by its *diastole*, receives from the *left auricle* the whole mass of blood; and that by its *systole* it impels the same blood successively into the *aorta*, by separate quantities; for the contraction of the *left ventricle* and dilation of the *left auricle*, by receiving at the same time more blood from the *lungs*, must divide the blood passing out of the *ventricle* from the next succeeding quantity then following into the *auricle*, though the time of separation is as short as the space between the pulsations of the artery. Thus each quantity of blood impelled into the *aorta* by the contracting of the *left ventricle*, propels the succeeding onwards; and by this means the whole mass of blood is protruded to the extremities of the capillary sanguine arteries, and through them into the capillary veins, so that every quantity of blood ejected from the left

THE BACK VIEW OF THE HEART

The
(CIRCULATION)
& the Effect of
VITAL AIR
on the Blood

THE FRONT VIEW OF THE HEART



left ventricle of the heart distends or forces the *aorta* into its diastole; thus the distended *aorta*, by a contractile motion, re-acts, and forces the said quantity of blood onwards, that while the *aorta* goes into its diastole, the *left ventricle* sinks into its systole, so that the motion of the *sanguine arteries* is regulated by the motion of the heart; for the whole mass of blood is in distinct successive quantities propelled through the arteries into their correspondent veins, and through them into the *vena cava*, and thence it passes, by successive quantities into the *right auricle* of the heart, thence into the *right ventricle*, and thence into the *arteria pulmonalis*; and from the extremities of its ramification into the capillary branches of the pulmonary vein, which in their course, by some uniting with others, become fewer and larger, till, in successive, distinct quantities, the blood is conveyed into the *left auricle*, and thence into the left ventricle of the heart, out of which it is again ejected for another circulation.

This is the course of the circulating blood, always moved, and always moving; always acted upon by its containing vessels, and acting against the sides of them, especially in their diastoles; and the blood flows through them, and is protruded against them, and that by the contractile actions of the *auricles* and *ventricles* of the heart, and of the *arteries* and *lungs*. MOTION being thus communicated to the blood, and its fluidity maintained, the circulation is continued during life.

Now these motions of the blood in the heart have a very powerful effect on the vital parts; for they produce a pressure in their diastoles on all the sanguine arteries, veins, or lymphatic vessels, and by their vibrating motion in these vessels adjacent to the sanguine arteries, produce the diastole in the sanguine arteries, and a ceasing of that pressure

pressure is the effect of their systoles; and while that pressure ceases, the diameters of the compressed vessels will be extended, as before the pressure. Also, there arises another effect, that of *attrition*, or rubbing of the constituent parts of the vessels, which are separated and washed off, which parts mix and circulate with the fluids, by which means the blood, and other animal fluids are altered, and rendered unfit for due circulation, then these unfit parts are carried off by some of the excreting vessels. There is also another effect produced by the vital motion of the heart, and due circulation of the blood, that is *assimilation*, or transmuting of many parts of the *chyle* into the nature or qualities of the blood, and other animal humours, by which they are made fit to adhere to the fluid and firm parts of the body.

By this it appears, that the *human body* is continually *wearing, wasting, and decaying*, by reason of these motions; and also, by the means of regular motions, it is continually repairing, and life and health are maintained.

There is another effect of the incessant motions of the heart and sanguine arteries, and the blood protruded through them, that is, the orifices of all the secreting and excreting *tubuli* of the several organs and glands of the body lie open to the blood flowing through the arteries, and that the force of the blood as it passes over the orifices of those *tubuli*, together with the force of the contractile motions of the *arteries*, which have alternate *systoles* and *diastoles*, correspondent to those of the *heart*, continually impels into those *tubuli* such particles as are minute enough to enter and pass through them, by which means it is abundantly sufficient for carrying on every secretion and excretion that is made in the body from the blood.

There is another effect arises from these motions, and that is, the *protusive motions* of the *nervous fluid*;

fluid; for the impulsions of the *nervous fluid* from the blood, in the secreting *tubuli*, both of the lesser and greater *brain*, must needs propel onwards a quantity of nervous fluid, before secreted, and thereby keep this fluid moving onwards, in a constant equal motion, to all parts of the body, that is, to all the vital parts, through the *nerves* which arise from the lesser brain, and to all the organs of the senses and other parts of the body, through the *nerves* which go off from the greater brain; and it is by this afflux of the *nervous fluid* that the motion of the *heart-arteries* and lungs, and of all the secreting and excreting organs and *glands*, and likewise of all the exercises of the *senses*, and all voluntary motions, are maintained and performed in the body.

If we require why secretions are not made at all periods of life? the reason will appear obvious, that the secreting *tubuli* are not, in the first years of life, large or open enough to receive from the blood, and admit through them, the humours to be secreted; and in great old age they become contracted, and incapable of receiving the humours. This is the state of the spermatic secreting *tubuli* in children and youth, before they come to the time of life called *puberty*; that is, till their spermatic vessels are large and open enough for their proper secretion. So also in the decline of life, in old age, when the spermatic secreting *tubuli* grow more dense, and their cavities less, they gradually become impermeable, and incapable of admitting through them those parts of the blood which constitute the *femen*; at this time the secretion ceases. Thus the periodical evacuations in women, and the secretion of *milk* in their breasts, may be very rationally accounted for; for it is evident, that whenever any secreting vessels are in a state capable of receiving from the blood their proper humour, and when such humour is in the blood, and

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separable

separable from it, then such secretion will happen. From which appears, that the health of the human body depends greatly on its *vital motions*, for there is a certain degree of strength or force in the vital incessant motions, and a certain proportion of time in the distances of them, which may be called the standard of health, and necessary to a continuance thereof; therefore by feeling the pulse, we find the motions of the heart and arteries, and if we find them too strong or too quick, we may rationally conclude that the others are so too; so, on the contrary, if the patient is plethoric, and we find a weak pulse, we then conclude the heart and arteries are so too, and that the vital principle is extremely weak. At such time we should not prescribe any thing to diminish the strength, or order venesection, for that would produce irreparable evil to the constitution.

These are the motions of the heart and arteries, with the blood circulating through them, and the motion of the flowing blood against its containing vessels; also the motion of the lungs in their systole and diastole, and the action of secretion performed by the cerebellum, or larger brain, in the anterior part of the head, from which the spirit, or nervous fluid, receives its course or motion.

Now while the *vital, natural, and animal functions*, in human bodies, remain in their natural and proper state, and are rightly performed, a person may be said to be in perfect health; therefore as health depends on a certain degree of strength or force in the vital organs, so an excess or deficiency of the circulating fluids tends to produce morbid symptoms.

But as it may be of great importance to the afflicted to be acquainted with some of those that declare a morbid quality in the blood, we will recite a few.

For instance, an intense heat, arising from the friction

friction of a superabundance of the red globules in the blood; or a dryness of the skin, from a deficiency in the quantity of the lymph secreted from the blood.

There may be a viscid quality in the blood: this is the case in intermitting, remitting, and all inflammatory fevers, in rheumatic and pleuritic fevers, which may be proved to ocular demonstration, by phlebotomy.

A pulse quicker than in health, shews some of the capillary arteries are obstructed; or if harder, as in pleurifies, the blood is fizy or viscid.

Those stools in fevers which are thin and bloody, and those that are colliquative, without blood, those also that are putrid and have a cadaverous scent, are symptoms which discover a dissolvent quality subsisting in the blood.

Colliquative sweats, that is, such perspirations, which are profuse, that feel greasy and clammy, and are attended with a wasting of the flesh, and a feeble pulse, and loss of strength and spirits, are a certain sign of a dissolvent quality in the blood.

When a fever is thus produced by a dissolvent quality in the blood, all medicines that are evacuates, as well as phlebotomy, should be avoided, otherwise death is inevitable.

Morbid qualities arise from other causes, and they bring on chronical distempers, that is, an acid acrimony in the *primæ viæ*, which shews itself in the stomach and intestines; the signs that discover this quality are sour belchings, which are the effects of acid particles emitted from the stomach, also a keen appetite, called canine appetite, which shews there is an alkaline or acid dissolvent acrimony in the digestive humours; so all kinds of flatulencies, and what is called the heart-burn, arise from the same cause.

A deficiency in the quantity of the animal fluids is one cause that produces distempers; it is

therefore necessary we should be acquainted with those signs which declare a deficiency in the quantity of the blood, of the lymph, and of the nervous fluid.

It is to be observed, that the quantity of blood is too little in all cachectic leucophlegmatic bodies, and all who are afflicted with intermitting fevers, and in all distempers arising from a poor and fizy blood; in these cases there is an alkaline acrimonious dissolvent quality; this being mixed with the blood, destroys its consistence, and renders it too thin, which not only brings on fevers, but colliquative loosenesses and sweats, that have no fever attending them.

If we examine the pulse in any complaint where a fever is attending, the state of the blood will be very discernible; therefore in a fever, if the pulse continues weak from the beginning, much weaker than in time of health, it shews an insufficiency of the influxes of nervous fluid from the cerebellum to the heart and arteries, for keeping up the force of the action of the vital organs to the healthful standard; and likewise a deficiency in the quantity of the fluid secreted by the cerebellum, discovers *dissolvent particles* subsisting in the blood, which has destroyed many of the component parts of it, and the texture of many of those particles, which will appear fizy or viscid.

A pulse unequal as to time declares an unequal visciduity of the blood, which runs faster through the capillary arteries while the thinner parts are flowing, and slower while the more viscid parts are passing through them; but a painful respiration is the effect of an inflammation or obstruction in the part pained; so an unequal respiration is another sign that shews an obstructed circulation of the blood, and an unequal visciduity of it; therefore a tongue that is white and furry shews that the blood, owing to its viscid quality, is carried to the extremities

mities of the capillary vessels, by which the superficies become empty of red blood, and contain only lymph, consequently look white. But there are different sorts of viscid qualities: in fevers the tongue appears moist, with aphthæ, that is, with small white ulcers; it is also a sign that the blood abounds with acrimonious and dissolvent particles, with an additional quantity of lymph, and with very little viscosity in the blood. There are other signs which declare acrid and corrosive particles in the blood, such as pains, itching, gnawing, stinging, arising from those pungent particles excreted from the blood, and striking against the extremities of the nerves affected. Bloody urine, in fevers, discovers a dissolvent quality in the blood, and that the excreting tubuli of the kidneys is relaxed, otherwise the blood could not pass from the kidneys with the urine. So is that urine a sign of a dissolvent quality in the blood, that emits a cadaverous scent: it also shews a putrefaction of the fluids or solids of the body, similar to that which always follows death.

If a pulse, in fevers, is like that in a state of health, it shews there are no obstructions in the capillary arteries, consequently there are no particles or viscid humours in the blood, too large for an easy circulation, yet it shews such fevers were produced by dissolvent causes, or a disunion in the component parts of the animal fluids.

An easy respiration, in fevers, attended with a dry and black tongue, is another sign of a dissolvent humour in the blood; but there is no considerable viscosity in it, nor particles too bulky to pass through the capillary arteries, yet it discovers there are acrimonious and corrosive particles destroying the consistence of the animal fluids, making them thin and corroding, and destroying the emissary ducts situated in the superficies of the tongue.

If the quantity of red globules does not bear a due proportion to the serum of the blood, but is much less than the standard of health, we may say, in such a person, the blood is deficient*. We may easily know when the quantity of blood is deficient, for the pulse is weak, and this shews the nervous fluid has not been secreted in due quantity; and as there is a deficiency in the quantity of this secretion, it shews a deficiency in the quantity of the blood: and it is easy to apprehend, that when the quantity of blood is too little, the quantities of the humours secreted from it must likewise be too little. This is a cogent argument against taking away blood from persons who have not too much; as the quantity of the important fluids secreted from the blood is less than it ought to be.

An habitual chillness, or coolness of the body, than in time of health, is another sign of the deficiency of blood; so is a feebleness of the natural and animal functions another diagnostic that the blood is too little; so if we find the body in a wasting state, it shews the same.

Acute distempers soon occasion a diminution of the quantity of the blood; for persons that are seized with them, immediately lose their appetite, and cannot take their usual quantity of aliment; and yet the expenditure from the blood is continually making, consequently their strength must daily grow less.

There are also signs which declare a deficiency of lymph; but this is not so much to our purpose; however we will mention a few. An extreme heat of the body, as in ardent fevers, which forces the thinnest parts of this fluid to perspire, and pass out of the body, and at the same time inspissates the blood, and abates the separation of the lymph

* It is observable, the mean quantity of current blood in a healthy body is about the nineteenth part of the weight of that body.

from it into the lymphatic arteries; so when the flesh is dry and parched, it is a sign of the like signification; because if there was a sufficient quantity of the lymph flowing through the lymphatic vessels, the flesh could not be in such a dry and parched state.

There are also certain signs which indicate a deficiency in the quantity of the nervous fluid, although it must be allowed that those who have the quantity of blood too little, manifest that the quantity of nervous fluid is less than it ought to be; nevertheless we will mention a few things as a criterion to judge by: as, a weak pulse; a chillness or deficiency in the vital heat; a feebleness in the performance of the vital, natural, and animal functions; excessive evacuations of any kind; a want of appetite, or an incapacity of receiving and digesting a sufficient quantity of aliment to supply the daily expences of the blood; a continual sickness at the stomach in acute distempers, with a disposition to faintings, and a constant lowness of spirit. From these symptoms it may be observed, that all diseases resulting from, or attended with, a deficiency in the quantity of the animal fluids, need for their cure such medicines as are reanimating.

It may not be useless to remark the ways by which *diseases* put a period to *life*. Immediately before the death of an animal body, there proceeds a cessation of the *respiration* and circulation of the blood, the most frequent causes of which are the following, viz. that inspissation or thickening of the blood, which renders it unpassable through the extremities of the capillary sanguine arteries, into the capillary sanguine veins; and it is easy to comprehend how such a thickness of the blood may first render the motion of it slower through the minuter arteries, and at the same time quicker through the larger; and then as the spissitude of it increases, the blood may become *unpassable*.

passable from the *capillary arteries* into the *capillary veins*; the consequence of which is a *stop* to the *circulation*. So in respect of the *respiration*, the inspissated blood passing too slowly through the capillary sanguine vessels of the lungs, must keep them too much distended, and render the contractions of the air-vesicles less in expiration, and consequently the respiration quicker and quicker, as the spissitude of the blood increases, till there is a total cessation of the action of the lungs, that is, till death; this is to be understood to be the way by which death happens to persons who die under *ardent fevers*; and in such cases where the blood is coagulated, to a mortal degree, by the bite of a mad dog, viper, or other venomous reptile. And indeed a certain excess of heat will in a few minutes so much inspissate the blood, as to render it unpassable from the arteries into the veins. To which I may add, that intense cold will also coagulate the animal fluids, and render them unpassable through their vessels, and so put a period to life; which is the case of persons frozen to death.

We may, from these considerations, learn the importance of using, in these cases, a medicine of the nature and property of the *Reanimating Solar Tincture*, capable of rendering the circulation easy, when the disease is produced by, and depends on, too great a spissitude of the animal fluids.

Another immediate cause of death is that *constriction* of the *muscular fibres* and *animal vessels*, which is inconsistent with their natural vibrating motion; such a *constriction* will immediately *stop* the *respiration*, and also the circulation of the blood, and so put an end to life; thus it is when persons die *suffocated* with the *fumes* of burning *brimstone*, or *charcoal*, or with the effluvia of any other substance that has a like strong, constringent quality; for while *life* continues, there is an alternate

nate contraction and dilatation or distention of the animal vessels, or a reciprocal action and re-action; and that which constricts the vessels so much as to stop these motions, does at the same time put a period to life. But although it is thus in these cases, yet I will not affirm it to be so in *chronical distempers*, nor in any *acute diseases*, except in *ardent fevers*, when the heat is so intense as to render the muscular fibres rigid, to such a degree that the vessels cannot be dilated by the force of the blood's motion, but remain in a state of contraction.

Again, that general relaxation of the *muscular fibres* of the heart and arteries, and other animal vessels, which renders them incapable of their natural *contractile* motion, will make the circulation of the blood to cease; this is self-evident, because if the contractile motion of the heart and arteries cease, the blood cannot be ejected from the heart into the *aorta*, nor propelled through the arteries into the veins, and consequently will put an end to life.

This general relaxation may be produced by various causes, particularly by a great deficiency in the quantity of blood, and of the nervous fluid secreted from it; for a sufficient supply of the fluid secreted by the cerebellum is necessary to keep up the strength of the vital organs; and in proportion to the diminution of the healthful quantity of nervous fluid will be the abatement of vital strength: and, in like manner, as a deficiency in the quantity of the nervous fluid increases, so the diminution of the muscular strength and relaxation of the vessels will be increased too: for as it is by the means of the nervous fluid that the heart and arteries exert their natural contractile force, so when the quantity of that fluid becomes diminished to a certain degree, the contractile power, naturally resident in the heart and arteries, must

cease, and a general relaxation of the vessels, and death, will be the immediate consequence.

And here it may be considered, that during the progress of diseases, especially of those that are acute, as the quantities of the aliment taken into the stomach are generally less than in time of health, and the evacuations from the body, of one sort or other, are frequently larger than in time of health, so there is daily a diminution of the patient's strength; and therefore we have reason to think the quantity of the nervous fluid is daily decreasing, and consequently that death may this way be brought on; and if we examine the pulse, we may judge how the deficiency in the quantity of the nervous fluid decreases, by taking notice of its weakness, and of the performance of the vital, natural, and animal functions. And from hence we may learn, that *cordials*, of one kind or other, become needful and useful remedies for the patient, in the progress of his sickness, almost under every disease; this is a point worthy of consideration, because the observance of it is a mean necessary to preserve or restore the strength of the action of the vital organs, which is the vital indication, and necessary to continue the contractile power in the muscular fibres and animal vessels, which is absolutely necessary to the continuance and duration of life.

A general relaxation of the muscular fibres of the heart and arteries may be produced by any particles of matter diffused in the blood, that have a strong dissolvent quality, for these will destroy the consistence of the animal fluids, and, by dividing and subdividing their globules, may reduce them to the minuteness which will occasion hæmorrhages, or colliquative stools, urines, or profuse perspirations; and likewise so far diminish and weaken the *cohesion* of the component parts of
the

the muscular fibres, as that no contractile power will remain in the animal vessels, but an universal relaxation of them; the consequence of which is a period both to respiration and the circulation of the blood, and then death closes the scene.

Thus it often happens to those persons who have a putrid fever, attended with a feeble languid pulse, and a diminution of the vital heat; but more especially if attended with languor, hæmorrhages, or colliquative evacuations.

From these observations, it will appear necessary that a medicine should be so compounded, capable of destroying or altering this dissolvent quality, and at the same time to strengthen the *cohesion* of the *component* parts of the *muscular fibres*, and so preserve the contractile power of the animal vessels.

In all complaints originating from such defects, the stimulating and REANIMATING efficacy of the SOLAR TINCTURE is most strikingly manifested, not only in living persons, but its powers are most astonishing where the Tincture is applied to those who apparently have met with accidental or sudden death.

For as life denotes the animate state of nature, so human beings exist so long as the union of the soul and body lasts. With us, therefore, life continues, until such separation has really taken place; which can no more be said to have happened during the paroxysm of a fit, or of a blow, which for a time deprives us of sensation, or in the *early* period of an unnatural and sudden death, than during the time we are asleep. It is the want of proper skill at such times that too often occasions death to take place, when life absolutely exists in the blood, and might with little care have been preserved. Death is therefore the act of separation of the soul from the body; in which sense it stands opposite to life. An animal body, by the actions inseparable from life, under,

goes a continual change, and receives its dissolution by degrees. Its smaller fibres become rigid; its minuter vessels grow into solid fibres, no longer pervious to the fluid; its greater vessels grow hard and narrow; and every thing becomes contracted, closed, and bound up: whence the dryness, immobility, and extenuation observed in old age. By such means the offices of the minuter vessels are destroyed; the humours stagnate, harden, and at length coalesce with the solids. Thus are the subtillest fluids in the body intercepted and lost, the concoction weakened, and the reparation prevented; only the blood continues to run slowly through the greater vessels, assiduous to preserve life, even after the animal functions are destroyed. At length, in the process of these changes, death becomes inevitable, as the necessary consequence of life. But it is rare indeed that life is thus long protracted, or that death succeeds merely from the natural decay and impaired state of old age: accidental diseases, and our neglect of preserving health, cut the work short.

The signs of death are often very uncertain. If we consult what Winslow or Bruchier have said on this subject, we shall be convinced that between life and death the shade is so very undistinguishable, that even all the powers of art can scarcely determine where the one ends and the other begins. The colour of the visage, the warmth of the body, and suppleness of the joints, are but uncertain signs of life still subsisting; whilst, on the contrary, the paleness of the complexion, the coldness of the body, the stiffness of the extremities, the cessation of all motion, and the total insensibility of the parts, are but uncertain marks of death having taken place. In the same manner, also, with regard to the pulse and breathing; these motions are so often kept under, that it is impossible to perceive them. By bringing a looking-glass near to the mouth of the person supposed to be dead, people often expect

pect to find whether he breathes or not. But this is a very uncertain experiment: the glass is frequently sullied by the vapour of the dead man's body; and often the person is still alive, though the glass is no way tarnished. In the same manner, neither noises in the ears, nor pungent spirits applied to the nostrils, give certain signs of the discontinuance of life; and there are many instances of persons who have passed them all, and afterwards recovered without any external assistance, to the astonishment of the spectators. This surely ought to be a caution against hasty burials, especially in cases of sudden death; for it is shocking to reflect, that some hundreds of valuable members of society are annually torn from their disconsolate families by some accidental sudden cause, and hurried thoughtlessly to the grave, in whom the principles of life were capable of being revived! This lamentable truth has been established by the happy success of the Humane Society, from whose laudable exertions several hundred persons have been restored to life, who, to all visible appearance, *were past recovery*. Every age and country affords some instances of persons having been recovered, even after long lying for dead; and from the number of those preserved by mere lucky accidents, it is evident that still greater numbers might be saved by timely pains and skill. Those who have contemplated the structure of the human machine, know that its dissolution cannot *naturally* happen but by that gradual decay of the whole system above described, when the vessels are become impervious to the fluids, the circulation weakened or destroyed, and the vital organs no longer able to perform their office. But when their functions are merely suspended by some sudden shock, it may be likened to the state of a watch stopped by a fall, which resumes its motion the instant that injury is repaired. In the animal economy, "*the BLOOD is the LIFE;*"

LIFE *;" therefore, if its circulation be suspended or destroyed, death follows. But if the blood can be re-agitated, and its circulation resumed, life will, of necessity, be restored. For this reason, whenever any accident has happened, by which sudden death appears to have taken place, whether by blows, fits, falls, suffocation, strangulation, drowning, apoplexy, convulsion fits, thunder and lightening, assassination, duelling, or the

* The shocking case of Mr. Groundwater, who was most inhumanly murdered, on the 23d of May, 1794, by the convicts in Cumberland Fort, near Portsmouth, manifests the truth of this remark. The above unfortunate person was deputed to overlook the convicts in their working hours; when having occasion to reprimand two of them, for misbehaviour, namely, Francis Jennison, and William Butterworth, who were under sentence of transportation for life, they fell upon the unhappy man with the iron shovels with which they were at work, and, having thrown him down, they struck the sharp edge of the shovels several times into his head, whereby the cranium was penetrated, and so large a fissure made, that part of the brains hung upon the spade, and the residue fell out upon the ground, in the quantity of a double handful. They then struck down one of the shovels on his neck, with an evident design to sever the head from the body; but, striking against the bone, it had not the intended effect. Now it is a most extraordinary circumstance, attested by several witnesses, on the trial of these inhuman wretches (who were convicted of the murder; at the ensuing Winchester assizes, and executed on the 4th of August, 1794) that Mr. Groundwater lived eighteen hours after he had received the above grievous wounds, and after the whole of the brain had fallen out of the cavity of the skull. He was entirely speechless; but the action of the pulse was remarkably strong, and respiration visibly continued during the whole of the eighteen hours above-mentioned. This was positively attested on the oath of Mr. Hill, the surgeon who attended him, and taken down as a most singular case, by Sir Nash Grose, who tried the prisoners. This fact therefore clearly decides the long-contested point among physiologists, whether the seat of life is in the heart, or in the brain? for it evidently shews that the life is in the blood, seated in its grand reservoir, the heart, which if ever so slightly wounded or impaired, the circulation ceases, and death instantly follows.

like,

like, let the unfortunate person be carried into a warm house, and laid by the fire, or put into a warm bed; let two or three table-spoonfuls of the Solar Tincture be introduced, as early as possible, into the stomach, and rubbed profusely in, by a warm hand, upon the spine of the back, loins, breast, and region of the heart, and poured into the wound, if there be any; the warm stimulating quality of the medicine, assisted by the external heat and friction, will quickly rouse the stagnant blood and juices, particularly in the grand reservoir, the heart, where rarefying, pressing every way, and being resisted by the valves, it will swell so as to make replete the flaccid right auricle of the heart, which by the shock had become empty, and at rest; and thus stimulating its fibres, will put them in motion. The right auricle being thus repleted and stimulated into contraction, fills the ventricle, which, by this means being irritated, likewise contracts and empties itself into the pulmonary artery; and the moment this is done, the circulation begins again where it left off; and the lungs being filled by the dephlogisticated air contained in the medicine, begin to act, and life is restored, provided the organs and juices are in a fit disposition for it; which they undoubtedly are much oftener than is imagined. Nor is this stimulating action of the Tincture upon the heart at all surprising; for every medical man knows, or ought to know, that the heart, even when taken out of the body, if it be pricked with a pin, or hath warm water thrown upon it, will beat afresh, and endeavour to exert its functions, though for some time before it had been motionless*. No person,

* There is a very curious and extraordinary phenomenon attends the heart; which, as it is known but to few, I would hereby render public; and the more so, as it wonderfully displays the omniscience of the Creator.

person, therefore, ought to be considered *dead*, until the energy of the blood is so far gone, that it can never again be agitated so as to fill and stimulate into contraction the right *sinus venosus* and auricle of the heart.

When

1. There are two coronary arteries arising from the beginning of the *aorta*, or great artery, before it proceeds from the pericardium, or bag which encloseth the heart. These arteries encompass this bowel externally on its surface several times, before it penetrates the *parenchyma*; whence they take their name.

2. There are many coronary veins to answer the said arteries, for bringing their blood back through the *vena cava*, or hollow vein, to keep up a regular circulation thereof. But what is very singular and remarkable here, is, that the blood enters these two said coronary arteries, *asynchronical* to the *vena cava* in all the other arteries of the body; an odd circumstance, yet not noticed by ancient anatomists.

3. The direction of these two coronary arteries, with respect to the course of the blood through the *aorta* they spring out from, is such as greatly impedes, if not wholly stops, at a certain instant, the entrance of the blood into them, during the heart's *systole*, or state of contraction.

4. This peculiar mechanism is evident to those who consider in what a retrograde manner these two arteries arise, making very acute angles with that part of the *aorta* which is nearest the ventricle of the heart.

5. The muscular substance of the heart itself, into which the finer branches of these arteries are distributed, during its *systole*, or contraction, is so firm, by being there corrugated, as is very unfavourable to the transit of the blood at that juncture. These are the two resisting causes which hinder the blood's entering the coronary arteries at the same time that it rushes into all the other arteries throughout the body.

6. On the other hand, as the blood impelled out of the left ventricle of the heart into the *aorta*, immediately on the cessation of the impelling power, makes a considerable push back again (as is proved from the well-known use of the semi-lunar valves; and the sides of the arteries, and the hot blood with which they are replete, necessarily make some resistance to its progressive motion); this *impetus* with which it recoils on the said valves, sufficiently raises them, and gives now a fit opportunity for the blood to enter the coronary arteries; especially as the soft relaxed state of the heart, now in its *diastole*, as well as the aforesaid particular direction

When the patient is thus far recovered, he ought to be treated with great care and tenderness; and some warm milk, wine and water, elder-flower tea, or any nourishing spoon-meat, should be given to him, as soon as he appears capable of taking food. In some cases it may be necessary to open the temporal artery and the external jugular, or to bleed in the arm; but this should never be done if it can safely be dispensed with, as it certainly weakens the animal principle, which it is the first object of the medicine to strengthen. Under different circumstances, and as particular occasions may require, the rules laid down in page 196 of my Family Physician, and recommended by the Humane Society, will be found of considerable advantage. Above all, let me intreat an anxious perseverance in this sublimest of all virtues--the attempt to recover perishing lives. Humanity calls for it in the most moving accents; and

direction of the arteries themselves, so much at acute angles, all concur remarkably to favour such an entrance and transit of the blood through the muscular substance of that enlivening bowel.

7. That this is the very case, autopsy will satisfy any one; for on opening a frog, you may see the heart becomes red at the beginning of every *diastole*, or relaxation thereof, and so continues during the whole time of its dilated or inactive state; but immediately at the commencement of the *systole*, that is, when the heart contracts, it becomes whitish, and so continues during the whole time of contraction.

8. What greater demonstration can be given than what these two remarkable proofs afford us, that the blood does not enter the coronary arteries during the *systole*, when it is propelled into the *aorta*, and all its other branches; but enters only during the heart's *diastole*, when its ventricles are dilated, and its muscular fibres are in a state of relaxation.

Of all the anatomical writers I have read (which have not been few) I never met with this piece of curiosity: only the great Boerhaave just touches on it, in his Medical Institutes, page 88, No. 183; from which short hint I have thus expatiated, for the entertainment of those who delight in such studies.

what can inspire a good mind with more sincere, perfect, conscientious, and commendable satisfaction, than a retrospect of such endeavours as have been generously exerted, and successfully contributed, to reanimate the life of a fellow-creature, from that most deprecated calamity---sudden death, with its alarming retinue of threatening consequences to those who die unprepared? since by thus preserving a sinner to a future period, perhaps a soul may emerge, in full maturity, to that felicity which can have no end!

To demonstrate the reanimating power of the medicine, experiments may be made on a fowl, lamb, cat, dog, or other animal, by plunging them under water until they are apparently dead, or by piercing them through the head, or any part of the body, except the heart; by suffocation, or an electrical shock: for sudden death, howsoever it happens, whether by drowning or otherwise, is much the same as to its effects on the vital organs; consequently they are all to be treated in a similar manner.

Upon the whole, it is evident, that by contemplating the economy and harmony of our structure, both externally and internally, we may quickly discern a proper line of conduct for the conservation of health, and the prolongation of life; and we shall also perceive a more august view of the marvellous works of divine wisdom in the structure of the human frame, than we shall perhaps again find in the whole compass of nature. The gift of health was evidently the design of our benignant Creator, in the construction of our bodies; it is therefore not less our duty than our interest to preserve this blessing to our latest moments, as the seasoning and fund which gives a relish to all our other enjoyments. To enumerate the various abuses of health, which take place from our earliest infancy, particularly among the rich

rich and gay, and which are continued through the succeeding stages of modish life, would fill a volume. Suffice it to be observed, that they prevail more particularly among people who are the most highly polished and refined. To compare their artificial mode of living with that of nature, would afford a very striking contrast, and supply an obvious reason why persons in the lower orders of society are generally the longest lived, and enjoy the best state of health; and hence we are warranted to conclude, that a large proportion of the diseases to which we are subjected are produced by our own imprudence.

Notwithstanding this unaccountable abuse of our health, yet we are well convinced that the want of it unfits us for most of the common avocations of life, and is more especially an enemy to the social and humane affections, as it generally renders the unhappy sufferer peevish and sullen, disgusted at the allotments of Providence, and apt to perpetrate suicide, by suggesting gloomy and suspicious sentiments of the Almighty. It obstructs the free exercise and full improvement of our reason, makes us a burden to our friends, and useless to society. Whereas the uninterrupted enjoyment of health is a constant source of good humour, and good humour is a great friend to openness and benignity of heart, enables us to encounter the various ills and disappointments of this world with more courage, or to sustain them with more patience: and, in short, conduces much, if we are otherwise duly qualified, to our acting our part in every exigency of life, with more firmness, consistency, and dignity; therefore it imports us much to preserve and improve the habit of healthful enjoyment, without which every other external entertainment is tasteless, and most other advantages are of little avail.

To this end we ought, above all things, to culti-


vate prudence, temperance, sobriety, fortitude, and equanimity of temper; for without a prudent care of the body, and a steady government of the mind, to guard the one from disease, and the other from the feuds of passion and prejudice, sound health is unattainable. By temperance we enjoy the real gratifications of life, without suffering any consequent inconvenience. Sobriety enables us to be content with simple and frugal fare, and protects us from the pain and disgrace of intoxication. Fortitude enables us to bear those infirmities which prudence and sobriety cannot shun, and banishes all dread of imaginary evils from our thoughts. Equanimity of temper contributes greatly to the happiness of life, as well as the conducement to health, by preserving the mind from anxiety and perturbation, and arming us against the calumnies and animosities of human nature. Violent passions, and the excesses they promote, gradually impair and wear away the constitution; whilst the calm and placid state of a temperate mind, and the healthful exercises of the body, preserve the natural functions in full vigour and harmony, and exhilarate the spirits, which are the chief instruments of action. The worst consequences that could possibly result from a strict adherence to this regimen, would be that of exterminating a swarm of locusts, and of rendering the discovery of my Medicine of much less importance to the community.

It may be said by the envious or interested individual, whose sordid nature seeks only to sell potions and receive fees, that because this Medicine appears to be prescribed for many disorders, it can be good for none:---I affirm, that every complaint for which it is recommended *originates in the blood, or in obstructed perspiration*. The action of the SOLAR TINCTURE is on the blood and juices; it strikes at the root of diseases, and
not

not barely at the branches ; by which peculiar advantage it effects a cure when other medicines fail. For this reason the Proprietor, unwilling to withhold from the afflicted, in every line of life, the benefits of his discovery, has determined to render it to the public at only 7s. 6d. the small, and 13s. the large bottle, duty included, with ample directions for every complaint in which it ought to be administered. A single bottle will, in many cases, perform a speedy cure, when, in the ordinary course of medical practice, it would occupy a month, and cost many pounds for unnecessary attendance, and an excess of drugs. The POWDERS, 2s. 6d. each packet.

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DESCRIPTION OF THREE PLATES,

ACCORDING TO THEIR REFERENCES.

The front View of the exterior Muscles, page 119.

- 1 Fontales.
- 2 Orbicularis palpebræ.
- 3 Zygomaticus major.
- 4 Nasales labii superior.
- 5 Depressor labii inferior.
- 6 Depressor anguli oris.
- 7 Platysma myoides.
- 8 Pectoralis.
- 9 Latissimus dorsi.
- 10 Serratus magnus.
- 11 Externus obliquus abdominis.
- 12 Recti abdominis.
- 13 Pyramidalis.
- 14 Linea alba.
- 15 Gracilis.
- 16 Adductor longus tricipitis femoris.
- 17 Pectineus.
- 18 Psoas magnus.
- 19 Iliacus internus.
- 20 Sartorius.
- 21 Glutæus medius.
- 22 Fascialis.
- 23 Vastus externus.
- 24 Rectus femoris.
- 25 Vastus internus.
- 26 Pars bicipitis.
- 27 Pars gastrocnemii.
- 28 Soleus.
- 29 Peroneus longus.
- 30 Extensor longus digitorum pedis.
- 31 Tibialis anticus.
- 32 Deltoides.
- 33 Triceps.
- 34 Biceps.
- 35 Brachiaëus externus.
- 36 Supinator longus.
- 37 Pronator rotundi radii.
- 38 Radialis internus.
- 39 Palmaris longus.
- 40 Sublimis.
- 41 Ulnaris internus.
- 42 Abductor longus pollicis.
- 43 Radialis externus longus.

The back View of the exterior Muscles, page 120.

- 1 Temporalis.
- 2 Mastoidæus.
- 3 Trapezius.
- 4 Deltoides.
- 5 Brachiaëus.
- 6 Gamellus.
- 7 Palmoris longus.
- 8 Sublimis.
- 9 Ulnaris internus.
- 10 Radialis externus longior.
- 11 Extensor communis digitorum.
- 12 Infra spinatus.
- 13 Latissimus dorsi.
- 14 Obliquus externus abdominis.
- 15 Glutæus medius.
- 16 Glutæus major.
- 17 Gracilis.
- 18 Adductor magnus femoris.
- 19 Semitendinosus.
- 20 Biceps cruris.
- 21 Vastus externus.
- 22 Gastrocnemius.
- 23 Soleus.
- 24 Tendo Achillis.

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- 1 The larynx.
- 2 The internal jugular vein.
- 3 The subclavian vein.
- 4 The vena cava descendens.
- 5 The right auricle of the heart.
- 6 The right ventricle.
- 7 Part of the left ventricle.
- 8 The aorta ascendens.
- 9 The arteria pulmonalis.
- 10 The right lobe of the lungs, part of which is cut off to shew the great blood-vessels.
- 11 The left lobe of the lungs.
- 12 The diaphragm.
- 13 The liver.
- 14 The ligamentum rotundum.
- 15 The gall-bladder.
- 16 The stomach pressed by the liver towards the left side.
- 17 The small guts.
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